Mathematical Operators

Different types of questions covered in this chapter are as follows

- Symbol Substitution
- Balancing the Equation
- Interchange of Signs and Numbers
- Trick Based Mathematical Operations

Note:- While solving a mathematical expression, proceed according to the rule **BODMAS** — *i.e.,* Brackets, Of, Division, Multiplication, Addition, Subtraction.

Example:

(36 -12) ÷4 + 6 + 2 x 3 = 24 ÷ 4 + 6 + 2 x 3 (Solving Bracket)

= 6 + 6 + 2 x 3 (Solving Division)

= 6+6+6 (Solving Multiplication)

= 18   (Solving Addition)

Type 1: Symbol Substitution

In this type of question, a candidate is provided with the substitutes for various mathematical symbols followed by a question involving calculation of an expression or choosing the correct/ incorrect equation. The candidate is required to put in the real signs in the given equation and then solve the questions as required.

Ex 1: if '×' means '−', '÷' means '+', + means '×', then 18 × 5 ÷ 5 +6 is equal to

1. 58
2. 49
3. 43
4. 37

Solution: (c)

Change of symbols according to the question,

? = 18 × 5 ÷ 5 + 6 = 18 − 5 + 5 × 6

= 18 − 5 + 30 = (13 + 30) = 43

Type 2: Balancing the Equation

In this type of questions, the signs in one of the alternatives are required to fill up the blank spaces in order to balance the given equation

Ex: Choose the correct option in order to balance the following equation.

24 6 12 16 = 0

1. - , + and +
2. ÷, + and ÷
3. -, - and -
4. ÷, + and −

Solution: (d)

From Option (d)

$24 \div 6 + 12 - 16 = 0$

$\dfrac{24}{6} + 12 - 16 = 0$

$4 + 12 - 16 = 0$

$16 - 16 = 0$

LHS = RHS

Hence, option (d) is correct.

Type 3: Interchange of Signs and Numbers

In this type of questions, the given equation becomes correct and fully balanced when either two signs of the equation or both the numbers and the signs of the equation are interchanged. The candidate is required to find the correct pair of signs and numbers from the given options.

Ex: Choose the correct interchange option in order to make the given equation correct

10 − 2 +9 × 2 ÷ 4 = 19

1. ÷,+,x and -
2. -,+,x and +

3. ÷, ÷,÷ and ×
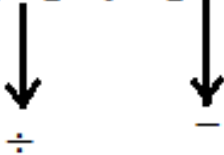4. ×,÷,× and ÷

Solution: (a)

Let us check the options one by one

From option (a),

$$10 - 2 + 9 \times 2 \div 4 = 19$$

$$\downarrow \qquad \qquad \downarrow$$

$$\div \qquad \qquad -$$

$$10 \div 2 + 9 \times 2 - 4 = 19$$

$$5 + 9 \times 2 - 4 = 19$$

$$5 + 18 - 4 = 19 \Rightarrow 23 - 4 = 19$$

$$\therefore 19 = 19$$

As options (a) gives us the correct answer. Hence, there is no need to check other options

Type 4: Trick Based Mathematical Operations

The questions are based on simple mathematical operations that do not follow a universal rule. These questions can be based on several different patterns.

Ex: If 9 × 5 × 2 = 529 and 4 × 7 × 2 = 724, then 3 × 9 × 8 = ?

1. 983
2. 839
3. 938
4. 893

Solution: (a)

9 ×5 ×2 = 5   2   9 and   4   ×7   ×2   = 7   2   4

Similarly,   3 ×9 ×8 = 9   8   3

= 983
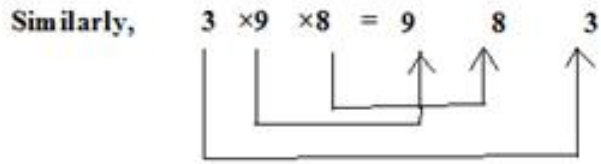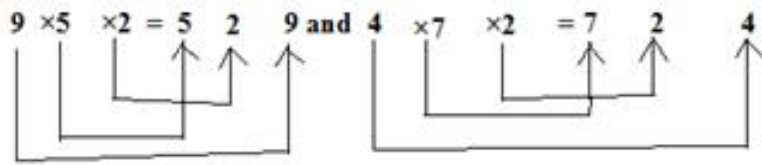
Mathematical Opeartions

Instructions

For the following questions answer them individually

Question 1

If '+' means '-', '-' means '*', '*' means '/' and '/' means '+', then what is the value of the following expression?

13 - 13 / 3 - 63 * 9 + 2 -5

A   170
B   180
C   190
D   200

   Answer: B

Explanation:

Let us replace the symbols with the actual operators.

13 - 13 / 3 - 63 * 9 + 2 -5 = 13 * 13 + 3*63/9 - 2*5

Applying BODMAS rule, we get, 169 + 3*7 - 10 = 180
Therefore, option B is the right answer.

Question 2

If '+' means '*', '-' means '+', '*' means '/' and '/' means '-', then what is the value of the following expression?

119*17 + 6 / 16 * 2 + 5

A   1
B   3
C   2

D   4

   Answer: C

Explanation:

Let us replace the symbols with the actual operators.

119*17 + 6 / 16 * 2 + 5 = 119/17 * 6 - 16/2 *5

Applying BODMAS rule, we get,

119/17 * 6 - 16/2 *5 = 7*6 - 8*5
= 42 - 40
= 2

Therefore, option C is the right answer.

Question 3

$$\sqrt{0.07 + \sqrt{0.0967 - 0.0643}} = \ ?$$

A   0.8

B   0.7

C   0.6

D   0.5

   Answer: D

Explanation:

$$\sqrt{0.07 + \sqrt{0.0967 - 0.0643}} = \sqrt{0.07 + \sqrt{0.0324}} = \sqrt{0.07 + 0.18} = \sqrt{0.25} = 0.5$$

So the answer is option D.

Question 4

Find x^{2018}, if $3x - 4.5 + 2.4 = -2.1$

A   0

B   1

C 7^{2018}

D 0.7^{2018}

Answer: A

Explanation:

$3x - 4.5 + 2.4 = -2.1$

$3x - 2.1 = -2.1$

$3x = 0$

$x = 0$

$x^{2018} = 0$

So the answer is option A.

Question 5

2.1221-3.1331+4.1441 = ?

A   9.3993

B   3.1331

C   6.2662

D   none of these

Answer: B

Explanation:

2.1221-3.1331+4.1441 = -1.0110+4.1441 = 3.1331

So the answer is option B.

Question 6

$\frac{5}{10} \times \frac{100}{125} \times \frac{25}{x} = 1$, **find x ?**

A   20

B   15

C   5

D   10

Answer: D

Explanation:

$\frac{5}{10} \times \frac{100}{125} \times \frac{25}{x} = 1$

$$\frac{10}{25} \times \frac{25}{x} = 1$$

$$\frac{10}{x} = 1$$

$$x = 10$$

So the answer is option D.

Question 7

$$\sqrt{0.9 - \sqrt{0.0234 - 0.0153}} = ?$$

A 0.9

B 0.99

C 0.999

D 9.0

Answer: A

Explanation:

$$\sqrt{0.9 - \sqrt{0.0234 - 0.0153}} = \sqrt{0.9 - \sqrt{0.0081}} = \sqrt{0.9 - 0.09} = \sqrt{0.81} = 0.9$$

So the answer is option A.

Question 8

$$\frac{3}{4} \times \frac{16}{27} \div \frac{2}{3} = ?$$

A 2/3

B 3/2

C 9/4

D 4/9

Answer: A

Explanation:

$$\frac{3}{4} \times \frac{16}{27} \div \frac{2}{3} = \frac{3}{4} \times \frac{16}{27} \times \frac{3}{2} = \frac{4}{9} \times \frac{3}{2} = \frac{2}{3}$$

So the answer is option A.

Question 9

0.1123-0.0012+1.0032 - 0.101 = ?

A 1.0033

B 1.1333

C 1.0133

D 1.1033

Answer: C

Explanation:

0.1123-0.0012+1.0032 - 0.101 = 0.1111 + 0.9022 = 1.0133

So the answer is option C.

Question 10

Find x, if 4x-0.3+0.22 = 2 ?

A 5.002

B 5.200

C 5.020

D 0.520

Answer: D

Explanation:

4x-0.3+0.22 = 2

4x-0.08 = 2

4x = 2.08

x = 0.52

So the answer is option D.

Question 11

$15 \div 3 + 2 \times 4 - 2 = x + 1$**, find** x **?**

A 9

B 10

C 11

D 12

Answer: B

Explanation:

$15 \div 3 + 2 \times 4 - 2 = x + 1$

$5 + 8 - 2 = x + 1$

$11 = x + 1$

$x = 10$

So the answer is option B.

Question 12

$\frac{6}{8} \times \frac{16}{18} \times \frac{3}{4} \times X = \frac{4}{7}$**, find** $1/X$ **?**

A 4/7

B 8/7

C 7/8

D 7/4

Answer: B

Explanation:

$\frac{6}{8} \times \frac{16}{18} \times \frac{3}{4} \times X = \frac{4}{7}$

$\frac{3}{4} \times \frac{8}{9} \times \frac{3}{4} \times X = \frac{4}{7}$

$$\frac{1}{2} \times X = \frac{4}{7}$$

$X = 8/7$

$1/X = 7/8$

So the answer is option B.

Question 13

576.78+456.87-x = 658.65, Find x ?

A 375

B 376

C 373

D 374

   Answer: A

Explanation:

576.78+456.87-x = 658.65

1033.65 - x = 658.65

x = 1033.65 - 658.65

x = 375

So the answer is option A.

Question 14

Find $((4096)^{1/3})^{1/2} =$?

A 2

B 3

C 4

D 5

   Answer: C

Explanation:

$((4096)^{1/3})^{1/2} = 16^{1/2} = 4$

So the answer is option C.

Question 15

3234 + 5678 - 11223 + 4456 = ?

A 4585

B 3545

C 5645

D 2145

   Answer: D

Explanation:

3234 + 5678 - 11223 + 4456 = 2145.

So the answer is option D.

Question 16

Find $\left[\left(\left(16\right)^{\frac{1}{4}}\right)^{\frac{2}{3}}\right]^{\frac{6}{2}}$ **= ?**

A　256

B　64

C　16

D　4

　Answer: D

Explanation:

$\left[\left(\left(16\right)^{\frac{1}{4}}\right)^{\frac{2}{3}}\right]^{\frac{6}{2}} = \left[16\right]^{\frac{1}{4}\times\frac{2}{3}\times\frac{6}{2}} = \left[16\right]^{\frac{1}{2}} = 4$

So the answer is option D.

Question 17

123.45+45.678-3.1345+13.234 = ?

A　146.3455

B　169.2275

C　156.3455

D　179.2275

　Answer: D

Explanation:

123.45+45.678-3.1345+13.234 = 179.2275

So the answer is option D.

Question 18

45.23+23.17-12.46+34.67 = ?

A　47.86

B　56.64

C　67.57

D　90.61

　Answer: D

Explanation:

45.23+23.17-12.46+34.67 = 90.61

So the answer is option D.

Question 19

$95^2 - 5^2 = ?$

A   8100

B   9000

C   9025

D   9205

   Answer: B

Explanation:

$95^2 - 5^2 = (95 + 5)(95 - 5) = 100 * 90 = 9000$

So the answer is option B.

Question 20

Which of the following is divisible by 3, 7, 9 and 11 ?

A   2645

B   4158

C   3791

D   1188

   Answer: B

Explanation:

3*7*9*11 = 2079

2079*2 = 4158 is divisible by 3, 7, 9, 11

So the answer is option B.

Question 21

3245 - 123 - 456 - 347 + x = 3650 ?

A   2134

B   1331

C   1567

D   1467

   Answer: B

Explanation:

3245 - 123 - 456 - 347 + x = 3650

2319 + x = 3650

x = 1331

So the answer is option B.

Question 22

$600 \div 12 \times \frac{1}{2} \div 5 = ?$

A   4

B   5

C 6

Answer: B

Explanation:

$600 \div 12 \times \frac{1}{2} \div 5 = 50 \times 1/10 = 5$

So the answer is option B.

Question 23

123.45 + 6789.01 - 2345.67 = ?

A   4565.79

B   4655.79

C   4566.79

D   4665.79

Answer: C

Explanation:

123.45 + 6789.01 - 2345.67 = 6912.46 - 2345.67 = 4566.79

So the answer is option C.

Question 24

4591.15 - 528.116 = x + 456.123. Find x ?

A   3660.911

B   3666.911

C   3006.911

D   3606.911

Answer: D

Explanation:

4591.15 - 528.116 = x + 456.123

4063.034 = x + 456.123

4063.034 - 456.123 = x

3606.911 = x

So the answer is option D.

Question 25

987.65-456.78-43.321 = ?

A   478.549

B   487.549

C   487.459

D   478.459

Answer: B

Explanation:

987.65-456.78-43.321 = 530.87 - 43.321 = 487.549

So the answer is option B.

SYMBOLS & NOTATIONS

TYPE–I (i)

Directions : In the following question you have to identify the correct response from the given premises stated according to following symbols :

1. If '+' stands for division, '÷' stands for multiplication, '×' stands for subtraction and '–' stands for addition, which one of the following is correct?
(1) 18 ÷ 6 – 7 + 5 × 2 = 20
(2) 18 + 6 ÷ 7 × 5 – 2 = 18
(3) 18 × 6 + 7 ÷ 5 – 2 = 16
(4) 18 ÷ 6 × 7 + 5 – 2 = 22
(SSC Combined Graduate Level Prelim Exam. 27.02.2000 (Ist Sitting)

2. If '–' stands for division, '+' for multiplication, '÷' for subtraction and '×' for addition, which one of the following equations is correct?
(1) 18 ÷ 3 × 2 + 8 – 6 = 10
(2) 18 – 3 + 2 × 8 ÷ 6 = 14
(3) 18 – 3 ÷ 2 × 8 + 6 = 17
(4) 18 × 3 + 2 ÷ 8 – 6 = 15
(SSC Combined Graduate Level Prelim Exam. 27.02.2000 (Ist Sitting)

3. In an imaginary mathe-matical operation '+' means multiplication, '×' means subtraction, '÷' means addition and '–' means division. All other rules in mathematical operation are the same as in the existing system.
Which one of the following gives the result of
175 – 25 ÷ 5 + 20 × 3 + 10 ?
(1) 160   (2) 2370
(3) 77   (4) 240
(SSC Combined Graduate Level Prelim Exam.27.02.2000 (IInd Sitting)

4. If '–' stands for division, '+' for multiplication, '÷' for subtraction and '×' for addition, which one of the following equations is correct?
(1) 6 ÷ 20 × 12 + 7 – 1 = 70
(2) 6 + 20 – 12 ÷ 7 × 1= 62
(3) 6 – 20 ÷ 12 × 7 + 1 = 57
(4) 6 + 20 – 12 ÷ 7 – 1 = 38
(SSC Combined Graduate Level Prelim Exam.27.02.2000 (IInd Sitting)

5. If '+' means '–', '–' means '×', '×' means '÷' and '÷' means '+' then
2 ÷ 6 × 6 ÷ 2 = ?
(1) 1   (2) 0
(3) 10   (4) 5
(SSC Combined Graduate Level Prelim Exam. 24.02.2002 (Ist Sitting)

6. If '+' means for Multiplication, '×' stands for Division, '–' stands for Addition and '÷' stands for Subtraction, what would the following equation stand for?
20 – 8 × 4 ÷ 3 + 2 = ?
(1) 41   (2) 19
(3) 16   (4) 18
(SSC Combined Graduate Level Prelim Exam. 24.02.2002 (IInd Sitting)

7. If '×' means '–' '–' means '÷', '+', means '×' and '÷' means '+', then what will be the value of the following expression ?
16 × 8 ÷ 4 – 3 + 9 = ?
(1) 10   (2) 19
(3) 20   (4) 9
(SSC Combined Graduate Level Prelim Exam. 24.02.2002 (Middle Zone)

8. If '+' means 'minus', '–' means 'multiplication', '÷' means 'plus', and '×' means 'division',
15 – 3 + 10 × 5 ÷ 5 = ?
(1) 52   (2) 48
(3) 22   (4) 5
(SSC CPO Sub-Inspector Exam. 07.09.2003)

9. If '–' stands for division, '÷' stands for multiplication, '+' stands for subtraction and '×' for addition, then which of the following equation is correct ?
(1) 20 + 8 – 7 ÷ 6 × 4 = 25
(2) 20 – 5 ÷ 4 + 6 × 5 = 15
(3) 20 × 5 – 6 ÷ 7 + 4 = 28
(4) 20 ÷ 4 – 8 × 10 + 6 = 36
(SSC Combined Graduate Level Prelim Exam. 08.02.2004 (IInd Sitting)

10. If × stands for + and ÷ for –, fiind the value of the following equation.
39 × 23 ÷ 21 × 5
(1) 46   (2) 36
(3) 62   (4) 89
(SSC CPO Sub-Inspector Exam. 05.09.2004)

11. If '+' stands for division; '÷' stands for multiplication; '×' stands of subtraction; '–' stands for addition which one of the following is correct ?
(1) 18 ÷ 6 – 7 + 5 × 2 = 20
(2) 18 + 6 ÷ 7 × 5 – 2 = 18
(3) 18 × 6 + 7 ÷ 5 – 2 = 16
(4) 18 ÷ 6 × 7 + 5 – 2 = 22
(SSC CPO Sub-Inspector Exam. 03.09.2006)

12. If + stands for 'division', × stands for 'addition', – stands for 'multiplication' and ÷ stands for 'subtraction', then which of the following equations is correct ?
(1) 36 × 6 + 7 ÷ 2 – 6 = 20
(2) 36 + 6 – 3 × 5 ÷ 3 = 24
(3) 36 ÷ 6 + 3 × 5 – 3 = 45
(4) 36 – 6 + 3 × 5 ÷ 3 = 74
(SSC CPO Sub-Inspector Exam. 03.09.2006)

13. If + means 'minus' –– means 'multiplied by', ÷ means 'plus' and × means 'divied by', then
10 × 5 ÷ 3 – 2 + 3 = ?
(1) 5   (2) 21
(3) $\frac{53}{3}$ (4) 18
(SSC Combined Graduate Level Prelim Exam. 04.02.2007 (Ist Sitting)

14. In the following question you have to identify the correct response from the given premises stated according to following symbols.
If + means ÷, – means ×, ÷ means + and × means –, then
63 × 24 + 8 ÷ 4 + 2 – 3 = ?
(1) 54   (2) 66
(3) 186   (4) 48
(SSC Combined Graduate Level Prelim Exam. 04.02.2007 (IInd Sitting)

15. The following equation becomes mathematically correct when you interchange either the sign or the numbers as indicated in the question. Find the correct alternative.
Given equation :
(16 – 4) × 6 ÷ 2 + 8 = 30
(1) 4 and 2   (2) ÷ and –
(3) 16 and 6   (4) – and +
(SSC CPO Sub-Inspector Exam. 16.12.2007)

┤ SYMBOLS & NOTATIONS ├

16. If '–' stands for division '+' stands for subtraction, '÷' stands for multiplication, '×' stands for addition, then which one of the following equations is correct?
(1) 70 – 2 + 4 ÷ 5 × 6 = 44
(2) 70 – 2 + 4 ÷ 5 × 6 = 21
(3) 70 – 2 + 4 ÷ 5 × 6 = 341
(4) 70 – 2 + 4 ÷ 5 × 6 = 36
(SSC Combined Graduate Level Prelim Exam. 19.06.2011 (Ist Sitting)

17. If – stands for division, + for multiplication, ÷ for subtraction and × for addition, then which one of the following equations is correct ?
(1) 19 + 5 – 4 × 2 ÷ 4 = 11
(2) 19 × 5 – 4 ÷ 2 + 4 = 16
(3) 19 ÷ 5 + 4 – 2 × 4 = 13
(4) 19 ÷ 5 + 4 + 2 ÷ 4 = 20
(SSC Combined Graduate Level Prelim Exam. 19.06.2011 (Ist Sitting)

18. If '–' stands for '÷' '+'stands for '×' , '÷' for '–' and '×' for '+', which one of the following equations in correct?
(1) 30 – 6 + 5 × 4 ÷ 2 = 27
(2) 30 + 6 – 5 ÷ 4 × 2 = 30
(3) 30 × 6 ÷ 5 – 4 + 2 = 32
(4) 30 ÷ 6 × 5 + 4 – 2 = 40
(SSC Combined Graduate Level Tier-1 Exam. 26.06.2011 (Ist Sitting)

19. If '×' means 'addition' '–' means 'division', '÷' means 'subtraction' and '+' means 'multiplication', then which of the following equations is correct ?
(1) 16 + 5 – 10 × 4 ÷ 3 = 9
(2) 16 – 5 × 10 ÷ 4 + 3 = 12
(3) 16 + 5 ÷ 10 × 4 – 3 = 9
(4) 16 × 5 ÷ 10 × 4 – 3 = 19
(SSC Combined Graduate Level Tier-1 Exam. 26.06.2011 (IInd Sitting)

20. If '–' stands for division, '+' for multiplication, '÷' for subtraction and '×' for addition, which one of the following equations is correct?
(1) 24 ÷ 8 – 4 + 2 × 3 = 16
(2) 24 – 8 + 4 × 2 ÷ 3 = 12
(3) 24 × 8 – 4 ÷ 2 + 3 = 17
(4) 24 + 8 – 4 × 2 ÷ 3 = 47
(SSC Combined Matric Level (PRE) Exam. 21.05.2000 (Ist Sitting) (East Zone)

21. If ÷ means plus, × means subtraction, then
(15 × 9) ÷ (12 × 4) × (4 ÷ 4) is equal to :
(1) 96
(2) 6
(3) $\frac{3}{128}$
(4) $\frac{143}{4}$
(SSC Combined Matric Level (PRE) Exam. 21.05.2000 (Ist Sitting) (Raipur, Madhya Pradesh)

22. If + means –, – means ×, ÷ means +, × means ÷, find the value of 15 × 3 ÷ 4 – 6 + 7 ?
(1) 22
(2) 25
(3) 9
(4) 175/3
(SSC Combined Matric Level (PRE) Exam. 21.05.2000 (Ist Sitting (Middle Zone)

23. If × stands for –, ÷ stands for +, + stands for ×, find the value of following equation:
(16 × 5) ÷ 5 + 3 = ?
(1) 62
(2) 10
(3) 2
(4) 26
(SSC Combined Matric Level (PRE) Exam. 21.05.2000, 30.07.2006 (Ist Sitting (Middle Zone)

24. If '÷' stands for addition, '–' stands for multiplication, '×' stands for subtraction and '+' stands for division, which of the responses does not hold good?
(1) 10 × 4 = 06
(2) 10 – 4 = 40
(3) 10 + 5 = 50
(4) 10 – 5 = 15
(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (Ist Sitting)

25. If '×' stands for '+', '÷' for '–', '–' for '×' and '+' for '÷', find the value of the following equation :
54 ÷ 16 – 3 × 6 + 2 = ?
(1) 9
(2) 12
(3) 8
(4) 15
(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (Ist Sitting)

26. If '+' stands for 'subtraction' and '÷' stands for 'addition' and '–' stands for 'multiplication' and '×' stands for division, then which of the following equations is correct?
(1) 56 + 12 × 34 - 12 = 102
(2) 8 ÷ 44 – 5 + 25 = 203
(3) 112 × 44 – 12 + 10 = 46
(4) 9 ÷ 64 – 2 × 6 = 54
(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (IInd Sitting)

27. If '–' stands for division, '+'stands for multiplication, '÷' stands for subtraction and '×' stands for addition, then which one of the equation is correct?
(1) 30 + 5 - 12 ÷ 8 × 12 = 70
(2) 30 – 5 + 12÷ 8 × 12 = 76
(3) 30 × 5 – 12 + 8 ÷ 12 = 60
(4) 30 ÷ 5 × 12 + 8 – 12 = 24
(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (IInd Sitting)

28. If '+' stands for multiplication, '×' stands for division, '–' stands for addition and '÷' stands for subtraction, what is the answer for the following equation?
20 – 5 ÷ 18 × (3 + 2) = ?
(1) 20
(2) 18
(3) 108
(4) 22
(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (IInd Sitting)

29. If '×' stands for minus, '+' stands for multiplication, '–' stands for plus, then which one of the following is correct?
6 + (3 × 1) + 5 = ?
(1) 58
(2) 64
(3) 60
(4) 12
(SSC Combined Matric Level (PRE) Exam. 27.05.2001 (IInd Sitting (East Zone)

30. If '+' means '÷', '÷' means '–', '–' means '×', '×' means '+', then
12 + 6 ÷ 3 – 2 × 8 = ?
(1) – 2
(2) 4
(3) 2
(4) 8
(SSC Combined Matric Level (PRE) Exam. 27.05.2001 (IInd Sitting (East Zone)

31. If '+' stands for '×', '–' for '÷' '×' for '–' and '÷' for '+', then find the value of the following equation
26 + 74 – 4 × 5 ÷ 2 = ?
(1) 220
(2) 376
(3) 478
(4) 488
(SSC Combined Matric Level (PRE) Exam. 27.05.2001 (IInd Sitting (East Zone)

32. If '+' stands for subtraction, '÷' stands for addition, '–' stands for multiplication and '×' stands for division, then which one of the following equations is correct?
(1) 46 – 10 + 10 × 5 = 92
(2) 265 + 11 – 2 × 14 = 22
(3) 66 × 3 – 11 + 12 = 230
(4) 2 – 14 × 4 ÷ 11 = 16
(SSC Combined Matric Level (PRE) Exam. 05.05.2002 (Ist Sitting) (Eastern Zone, Guwahati)

⊢ SYMBOLS & NOTATIONS ⊣

33. In the following question, you have to identify the correct response from the given premises stated according to following symbols.

If + denotes –, – denotes = , = denotes + , ÷ denotes >, × denotes <, how do you solve the following problem?

8 + 4 – ?

(1) 4   (2) 32

(3) 12   (4) 2

(SSC Combined Matric Level (PRE) Exam. 05.05.2002 (Ist Sitting) (North Zone, Delhi)

34. If '–' means addition, '+' means subtraction, '×' means division and '÷' means multiplication, then

7 – 10 × 5 ÷ 6 + 4 = ?

(1) 3   (2) 12

(3) 15   (4) 9

SSC Combined Matric Level (Pre) Exam. 30.03.2008 (Ist Sitting)

35. If '÷' means '×', '–' means '+', '×' means '–', '+' means '÷', then what will be the value of the following?

20 + 4 ×6 – 5 ÷ 7

(1) 28   (2) 32

(3) 34   (4) 36

SSC Data Entry Operator Exam. 31.08.2008

36. If '+' means ×, '–' means +, '×' means '÷' and '÷' means –, then

10 + 5 × 10 ÷ 2 – 5 has a value of

(1) 35   (2) 45

(3) 30   (4) 8

SSC Data Entry Operator Exam. 02.08.2009

37. If '+' stands for division, '÷' stands for multiplication, multiplication for addition; which one of the following equations is correct ?

(1) 10 ÷ 5 + 4 = 6

(2) 10 – 4 + 2 = 6

(3) 10 + 2 – 5 = 6

(4) 10 + 2 × 1 = 6

SSC Stenographer (Grade'C & D) Exam. 26.09.2010

38. If '+' stands for '÷', '×' stands '+', '–' stands for '×', and '÷' stands for '–', then which of the following statements is correct ?

(1) 36 × 6 + 7 ÷ 2 – 6 = 20

(2) 36 ÷ 6 + 3 × 5 – 3 = 45

(3) 36 + 6 – 3 × 5 ÷ 3 = 24

(4) 36 – 6 + 3 × 5 ÷ 3 = 74

(SSC HSL Data Entry Operator & LDC Exam. 27.11.2010 & SSC Combined Matric Level (Pre) Exam, 30.07.2006)

39. Identify the correct response from the given premises stated according to following symbols.

If '–' stands for division

'+' stands for multiplication.

'÷' stands for subtraction

'×' stands for addition

Which one of the equations is correct ?

(1) 18 +14 – 24 × 12 ÷ 16 = 12

(2) 16 ×14 – 24 ÷ 18 + 12 = –24

(3) 24 – 12 +12 ÷ 16 × 18 = 26

(4) 18 ÷ 16 +12 × 18 ÷ 12 = 24

(SSC Higher Secondary Level Data Entry Operator & LDC Exam. 28.11.2010 (Ist sitting)

40. If '×' means '–' , '–' means '×', '+' means '÷' and '÷' means '+', then

(15– 10) ÷ (130 + 10) × 50 = ?

(1) 1800   (2) 113

(3) 2000   (4) 123

(SSC Multi-Tasking (Non-Technical) Staff Exam. 20.02.2011)

41. If '+' means '÷', '–' means '×', '÷' means '+' and '×' means '–', then

36 × 12 + 4 ÷ 6 + 2 – 3 = ?

(1) 42   (2) 18

(3) 40   (4) 2

(SSC Multi-Tasking (Non-Technical) Staff Exam. 27.02.2011)

42. If T means '×', U means '–', V means '÷' and W means '+', then what will be the value of the following expression :

(50 V 2) W (28 T 4)

(1) 142   (2) 158

(3) 137   (4) 163

(SSC Stenographer (Grade 'C' & 'D') Exam. 16.10.2011)

43. If – stands for ÷, + stands for ×, ÷ stands for – and × stands for + find out which one is correct.

(1) 49 × 7 + 3 ÷ 5 – 8 = 16

(2) 49 ÷ 7 × 3 + 5 – 8 = 26

(3) 49 + 7 – 3 × 5 ÷ 8 = 20

(4) 49 – 7 + 3 ÷ 5 × 8 = 24

(SSC Level Data Entry Operator & LDC Exam. 21.10.2012 (Ist Sitting)

44. If '+' means '×', '–' means '÷', '×' means '+' and '÷' means '–' then

25 × 5 – 3 ÷ 2 + 5 = ?

(1) 20   (2) 50

(3) 30   (4) 40

(SSC Level Data Entry Operator & LDC Exam. 21.10.2012 (IInd Sitting)

45. If '–' stands for addition, '+' for multiplication, '÷' for subtraction and '×' for division, which one of the following equation is *wrong* ?

(1) 5 – 2 +12 × 6 ÷ 2 = 27

(2) 5 + 2 – 12 ÷ 6 × 2 = 13

(3) 5 + 2 – 12 × 6 ÷ 2 = 10

(4) 5 ÷ 2 + 12 × 6 – 2 = 3

(SSC Level Data Entry Operator & LDC Exam. 28.10.2012 (Ist Sitting)

46. If × stands for –, + means ×, ÷ means + and – means ÷, then what is the value of the given expression ?

175 – 25 ÷ 5 + 20 × 3 + 10 = ?

(1) 77   (2) 160

(3) 240   (4) 2370

(SSC Level Data Entry Operator & LDC Exam. 04.11.2012 (IInd Sitting)

47. If '+' means '÷'; '÷' means '–'; '–' means '×'; '×' means '+', then

8 + 2 ÷ 3 – 4 × 6 = ?

(1) – 12   (2) – 2

(3) – 10   (4) –15

(SSC (10+2) Level DEO & LDC Exam. 04.11.2012, Ist Sitting)

48. If '÷' means '–', '–' means '×', '×' means '+' and '+' means '÷' then

20 × 60 ÷ 40 – 20 + 10 = ?

(1) 80   (2) 60

(3) 40   (4) 0

(SSC Multi-Tasking Staff Exam. 17.03.2013, Ist Sitting)

49. If '+' means '÷', '×' means '+', '–', means '×' and '÷' means '–', then which of the following equations is correct ?

(1) 36 × 6 + 3 – 2 < 20

(2) 36 × 6 + 3 × 2 > 20

(3) 36 + 6 × 3 + 2 = 20

(4) 36 + 6 – 3 × 2 = 20

(SSC Multi-Tasking Staff Exam. 17.03.2013, IInd Sitting)

50. If – stands for addition, ÷ for multiplication, × for substraction, and + for division, then which of the following is correct ?

(1) 25 – 15 + 5 ÷ 4 × 16 = 21

(2) 25 + 11 – 4 ÷ 10 × 6 = 20

(3) 25 × 12 – 14 ÷ 4 + 6 = 16

(4) 25 – 12 + 14 ÷ 2 × 4 = 15

(SSC Graduate Level Tier-I Exam. 21.04.2013, Ist Sitting)

51. Which of the following interchange of signs would make the given equation correct ?

5 + 3 × 8 – 12 ÷ 4 = 3

┤ SYMBOLS & NOTATIONS ├

(1) – and ÷   (2) + and ×

(3) + and ÷   (4) + and –

(SSC Graduate Level Tier-I Exam. 21.04.2013, Ist Sitting)

52. Put the correct mathematical signs in the following equation from the given alternatives.

33 ? 11 ? 3 ? 6 ? = 115

(1) –, ×, +   (2) +, –, ×

(3) ×, ÷, –   (4) ÷, ×, ×

(SSC Graduate Level Tier-I Exam. 19.05.2013, Ist Sitting)

53. If 'x' means '+', ÷ means '–', + means '÷' and '–' means '×' then what should be the value of the given equation?

14 × 4 ÷ 70 + 10 – 2 = ?

(1) 33   (2) 15

(3) 30   (4) 4

(SSC CAPFs SI & CISF ASI Exam. 23.06.2013)

54. If + means ÷, – means ×, × means + and ÷ means –, then which of the alternatives is **correct** ?

(1) 5 × 8 – 5 + 5 ÷ 1 = 12

(2) 55 – 2 + 10 ÷ 1 × 5 = 16

(3) 38 ÷ 10 – 5 + 7 × 8 = 25

(4) 10 – 12 + 2 ÷ 30 × 1 = 10

(SSC CGL Tier-I Re-Exam–2013, 27.04.2014)

55. If '–' stands for '+', '+' stands for 'x', 'x' stands for '–' then which one of the following is not correct ?

(1) 22 + 7 – 3 × 9 = 148

(2) 33 × 5 – 10 + 20 = 228

(3) 7 + 28 – 3 × 52 = 127

(4) 44 – 9 + 6 × 11 = 87

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam. 22.06.2014)

56. If '+' stands for 'division'; 'x' stands for 'addition'; '–' stands for 'multiplication'; '÷' stands for 'subtraction', which of the following equations is correct?

(1) 5 – 3 + 2 × 4 ÷ 8 = 2

(2) 5 × 3 + 2 – 4 × 8 = 19

(3) 5 ÷ 3 × 2 – 4 + 8 = 8

(4) 5 + 3 × 2 ÷ 4 – 8 = 4

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam. 22.06.2014)

57. If '+' means '÷'; '–' means '+'; 'x' means '–' and '÷' means 'x', then,

8 ÷ 4 – 6 + 3 × 4 = ?

(1) 4   (2) 14

(3) 28   (4) 30

(SSC GL Tier-I Re-Exam. (2013) 20.07.2014, Ist Sitting)

58. If '+' means '–'; '–' means 'x'; 'x' means '÷' and '÷' means '+', then

25 × 5 ÷ 30 + 8 – 2 = ?

(1) 54   (2) 15

(3) 18   (4) 19

(SSC GL Tier-I Re-Exam. (2013) 20.07.2014, IInd Sitting)

59. If '–' stands for addition, '+' stands for subtraction, '÷' stands for multiplication and 'x' stands for division, then which one of the following equation is correct ?

(1) 50 × 5 ÷ 2 – 30 + 25 = 25

(2) 50 – 30 + 5 ÷ 2 × 30 = 25

(3) 40 + 35 × 2 – 50 ÷ 30 = 95

(4) 30 × 2 – 25 + 50 ÷ 5 = 100

(SSC GL Tier-I Exam. 19.10.2014 (Ist Sitting)

60. If + stands for division; x stands for addition; – stands for multiplication; ÷ stands for subtraction, which of the following is correct ?

(1) 15 ÷ 5 × 2 – 6 + 3 = 28

(2) 15 × 5 + 2 – 6 ÷ 3 = 56.5

(3) 15 + 5 – 2 ÷ 6 × 3 = 3

(4) 15 – 5 + 2 × 6 ÷ 3 = 41

(SSC GL Tier-I Exam. 19.10.2014)

61. If '–' stands for 'division', '+' stands for 'multiplication', '÷' stands for 'subtraction', 'x' stands for 'addition', then which one of the following equations is correct ?

(1) 36 × 4 – 12 + 5 ÷ 3 = 420

(2) 52 ÷ 4 + 5 × 8 – 2 = 36

(3) 36 – 12 × 6 ÷ 3 + 4 = 60

(4) 43 × 7 ÷ 5 + 4 – 8 = 25

(SSC GL Tier-I Exam. 26.10.2014)

62. If *a* represents ÷, *b* represents +, *c* represents – and *d* represents × then

24 *a* 6 *d* 4 *b* 9 *c* 8 = ?

(1) 20   (2) 6

(3) 17   (4) 19

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam, 21.06.2015 (Ist Sitting) TF No. 8037731)

63. If × means +, + means ÷, – means × and ÷ means –, then 6 × 4 – 5 + 2 ÷ 1 = ?

(1) 11   (2) 15

(3) 10   (4) 12

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam, 21.06.2015 IInd Sitting)

64. If, + stands for division; × stands for addition; – stands for multiplication; ÷ stands for subtraction, which of the following is correct?

(a) 46 × 6 ÷ 4 – 5 + 3 = 74

(b) 46 – 6 + 4 × 5 ÷ 3 = 71

(c) 46 ÷ 6 × 4 – 5 + 3 = 75.5

(d) 46 × 6 – 4 + 5 ÷ 3 = 70.1

(1) c   (2) d

(3) b   (4) a

(SSC CGL Tier-I Exam, 09.08.2015 (Ist Sitting) TF No. 1443088)

65. If + = ×, – = ÷, × = +, ÷ = –, then which is the correct equation out of the following?

(1) 18 – 6 × 7 ÷ 2 + 8 = 63

(2) 18 ÷ 6 + 4 – 2 ÷ 3 = 22

(3) 18 + 6 – 4 × 2 ÷ 3 = 26

(4) 18 × 6 – 4 + 7 × 8 = 47

(SSC CGL Tier-I Exam, 09.08.2015 (Ist Sitting) TF No. 1443088)

66. If '+' means 'x', '–' means '÷', 'x' means '–' and '÷' means '+', then what will be the value of 16 ÷ 64 – 8 × 4 + 2?

(1) 18   (2) 24

(3) 16   (4) 12

(SSC CGL Tier-I Exam, 16.08.2015 (Ist Sitting) TF No. 3196279)

67. If + stands for *; – stands for #; × stands for @ and ÷ stands for %, then which of the following statements is correct?

(1) 256% 16 @ 5 # 28 = 52

(2) 256 # 16 % 5 # 28 = 120

(3) 256 @ 5 % 16 * 28 = 408

(4) 256 # 16 @ 5 % 28 = 80

(SSC CGL Tier-I Re-Exam, 30.08.2015)

68. If

÷ stands for ×

× stands for –

– stands for + and

+ stands for ÷, then

48 + 6 – 12 ÷ 2 + 10 = ?

(Do chronologically and not according to BODMAS rule)

(1) 9   (2) 14

(3) 16   (4) 4

(SSC Constable (GD) Exam, 04.10.2015, Ist Sitting)

69. Select the set of symbols which can be fitted correctly in the equation.

5 ___ 3 ___8___4__2 = 21

┤ SYMBOLS & NOTATIONS ├

(1) +, ×, +, ÷   (2) ×, +, –, ÷

(3) –, ×, +, ÷   (4) +, ×, –, ÷

(SSC (10+2) LDC/DEO/PA/SA Exam. 01.11.2015 TF No. 1098066)

70. If *a* means +, *b* means ×, *c* means ÷, *d* means –, then 20 *a* 10 *b* 45 *c* 5 *d* 12 = ?

(1) 88   (2) 74

(3) 98   (4) 68

(SSC (10+2) LDC/DEO/PA/SA Exam. 01.11.2015 TF No. 1098066)

71. If + stands for division; × stands for addition; – stands for multiplication, ÷ stands for subtraction, which of the following is correct?

(1) 25 × 3 – 7 ÷ 8 + 12 = 18

(2) 25 + 3 × 7 – 8 ÷ 12 = 10.89

(3) 25 – 3 ÷ 7 × 8 + 12 = 132

(4) 25 ÷ 3 × 7 – 8 + 12 = 19.3

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 01.11.2015, IInd Sitting)

72. Insert the arithmetical operations in the following numerical figure-

4_3_4 = 48

(1) + +   (2) + –

(3) × +   (4) × ×

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 01.11.2015, IInd Sitting)

73. If the given interchanges are made in signs and numbers, which one of the following equation is true?

(Signs : ÷ and +, Numbers : 6 and 5)

(1) 18 + 6 ÷ 5 = 9.6

(2) 26 ÷ 5 + 6 = 6.4

(3) 5 ÷ 6 + 80 = 5.8

(4) 90 + 5 ÷ 6 = 8.6

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 15.11.2015 (Ist Sitting) TF No. 6636838)

74. If '–' stands for addition, '+' for multiplication, '÷' for subtraction and '×' for division, which one of the following equations is **correct**?

(1) 5 + 2 – 12 ÷ 6 × 2 = 13

(2) 5 + 2 – 12 × 6 ÷ 2 = 10

(3) 5 ÷ 2 + 12 × 6 – 2 = 4

(4) 5 – 2 + 12 × 6 ÷ 2 = 27

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 15.11.2015 (IInd Sitting) TF No. 7203752)

75. If P denotes '÷', Q denotes '×', R denotes '+' and S denotes '–', then 16Q12P6R5S4 = ?

(1) 31   (2) 32

(3) 33   (4) 30

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 15.11.2015 (IInd Sitting) TF No. 7203752)

76. If × stands for ÷, ÷ stands for +, + stands for –, and – stands for ×, then what is the value of (30 + 20) – 5(7 ÷ 3) × 25 = ?

(1) 100   (2) 10

(3) 20   (4) 25

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 06.12.2015 (Ist Sitting) TF No. 1375232)

77. If + means ÷, ÷ means –, – means ×, × means +, then 12 – 8 × 6 – 4 ÷ 6 + 3 = ?

(1) –112   (2) +118

(3) –33   (4) +92

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 06.12.2015 (Ist Sitting) TF No. 1375232)

78. If + means ÷, ÷ means ×, and × means +, then following will be:

64 + 8 × 32 ÷ 4

(1) 128   (2) 160

(3) 136   (4) 144

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 06.12.2015 (IInd Sitting) TF No. 3441135)

79. If '–' denotes '+', '+' denotes '×', '÷' denotes '–', '×' denotes '÷' then, 27 × 3 ÷ 6 + 9 – 8 = ?

(1) 15   (2) 14.5

(3) 35   (4) 3.5

(SSC (10+2) Stenographer Grade 'C' & 'D' Exam. 31.01.2016 TF No. 3513283)

80. What will be the correct mathematical signs that can be inserted in the following?

4_6_2_4_8 = 16

(1) – × + ÷   (2) ÷ + × –

(3) + ÷ – ×   (4) × ÷ – +

(SSC (10+2) Stenographer Grade 'C' & 'D' Exam. 31.01.2016 TF No. 3513283)

81. In a certain code 0, 1, 2 ...... 9 is coded as a,b,c........, j then find baf ÷ bf × d

(1) cb   (2) d

(3) df   (4) be

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 06.12.2015 (Ist Sitting) TF No. 1375232)

82. Which one of the following interchanges of signs would make the given equation correct?

5 + 3 × 8 – 12 ÷ 4 = 3

(1) – and ÷   (2) + and ×

(3) + and ÷   (4) + and –

(SSC (10+2) Stenographer Grade 'C' & 'D' Exam. 31.07.2016)

83. If '+' stands for division; '×' stands for addition; '–' stands for multiplication; '÷' stands for subtraction, then which of the following equations is correct?

(1) 33 × 4 – 5 + 6 ÷ 2 = 26

(2) 33 ÷ 4 × 5 + 6 – 2 = 30

(3) 33 – 4 + 5 + 6 × 2 = 24

(4) 33 – 4 ÷ 5 × 6 + 2 = 130

(SSC (10+2) Stenographer Grade 'C' & 'D' Exam. 31.07.2016)

84. If '×' means addition, '–' means division, '÷' means subtraction and '+' means multiplication, then which of the equations is correct?

(1) 16 × 5 ÷ 10 + 4 – 3 = 19

(2) 16 + 5 ÷ 10 × 4 – 3 = 9

(3) 16 + 5 – 10 × 4 ÷ 3 = 9

(4) 16 – 5 × 10 ÷ 4 + 3 = 12

(SSC CGL Tier-I (CBE) Exam.10.09.2016)

85. If '+' is '×', '–' is '+', '×' is '÷' and '÷' is '–', then answer the following questions based on this information.

9 – 4 + 2 ÷ 16 × 2

(1) 71   (2) 62

(3) 9   (4) 24

(SSC CPO SI, ASI Online Exam.05.06.2016) (IInd Sitting)

86. Identify the symbols to be inserted to make the expression correct.

(1) × + ×   (2) = × +

(3) × ÷ =   (4) + = ×

(SSC CPO SI, ASI Online Exam.05.06.2016) (IInd Sitting)

87. Study the following statements and answer the questions accordingly.

'+' stands for division

'÷' stands for multiplication

'×' stands for addition

Which one of the following is correct?

(1) 30 × 40 + 8 – 70 ÷ 40 = 180

(2) 30 + 40 ÷ 8 × 70 – 40 = 340

(3) 30 – 40 × 8 ÷ 70 + 40 = 180

(4) 30 + 40 + 8 × 70 – 40 = 340

(SSC CPO SI, ASI Online Exam.05.06.2016) (IInd Sitting)

| SYMBOLS & NOTATIONS |

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88. If '×' means 'addition', '−' means 'division', '/' means 'subtraction' and '+' means 'multiplication', then which of the equation is correct?
(1) 25 + 10 − 5/10 × 3 = 43
(2) 25 − 10 × 5 + 10/3 = 72
(3) 25 × 10/5 + 10 − 3 = 12
(4) 25/10 + 5 × 10/3 = 18
(SSC CHSL (10+2) Tier-I (CBE) Exam. 08.09.2016) (Ist Sitting)

89. If '+' stands for multiplication, '−' stands for addition, '×' stands for division, then what is the value of
128 + 9 − 16 × 4 = ?
(1) 73 　　　　(2) 256
(3) 1156 　　　(4) 1352
(SSC CGL Tier-I (CBE) Exam. 09.09.2016) (Ist Sitting)

90. If '+' stands for division, $^{\wedge}\div^{*}$ stands for multiplication, $^{\wedge}\times^{*}$ stands for subtraction and '−' stands for addition, which one of the following expressions is correct ?
(1) 18 × 6 + 7 ÷ 5 − 2 = 16
(2) 18 ÷ 6 × 7 + 5 − 2 = 22
(3) 18 ÷ 6 − 7 + 5 × 2 = 20
(4) 18 + 6 ÷ 7 × 5 − 2 = 18
(SSC CAPFs (CPO) SI & ASI, Delhi Police Exam. 20.03.2016) (IInd Sitting)

91. If '+' stands for multiplication, '−' stands for division, '×' stands for addition , '÷' stands for subtraction, then which one of the following equations is correct ?
(1) 12 × 5 + 4 − 5 ÷ 4 = 20
(2) 12 ÷ 5 + 4 − 5 × 4 = 18
(3) 12 + 5 − 4 × 5 ÷ 4 = 16
(4) 12 ÷ 5 − 4 × 5 + 4 = 22
(SSC CAPFs (CPO) SI & ASI, Delhi Police Exam. 20.03.2016) (IInd Sitting)

92. If ÷ means +, + means ×, × means − and − means ÷, then what is the value of :
[(1440 − 36 × 16) + 15] + 5 ÷ (144 − 12) + 25 =?
(1) 1500 　　　(2) 2100
(3) 1200 　　　(4) 4800
(SSC CAPFs (CPO) SI & ASI, Delhi Police Exam. 05.06.2016) (Ist Sitting)

93. If + means ×, − means +, × means ÷, ÷ means −, then what is the value of
50 + 10 − 50 × 10 ÷ 125 ?
(1) 380 　　　(2) 56
(3) 180 　　　(4) −125
(SSC CAPFs (CPO) SI & ASI, Delhi Police Exam. 05.06.2016) (Ist Sitting)

94. If '×' means '−', '−' 'means' '÷', '+' means '×' and '÷' means '+', then what will be the value of the following expression?
16 × 8 ÷ 4 − 3 + 9
(1) 10 　　　　(2) 19
(3) 20 　　　　(4) 9
(SSC CGL Tier-I (CBE) Exam. 27.08.2016) (IInd Sitting)

95. If '−' stands for division, '+' for multiplication, '÷' for subtraction and '×' for addition, which one of the following equations is correct ?
(1) 18 ÷ 3 × 2 + 8 − 6 = 10
(2) 18 − 3 + 2 × 8 ÷ 6 = 14
(3) 18 − 3 ÷ 2 × 8 + 6 = 17
(4) 18 × 3 + 2 ÷ 8 − 6 = 15
(SSC CGL Tier-I (CBE) Exam. 30.08.2016) (Ist Sitting)

96. If '+' means '×', '−' means '÷', '×' means '−' and '÷' means '+', then find the value of the following equation.
6 + 64 − 8 ÷ 45 × 8
(1) 85 　　　　(2) 76
(3) 87 　　　　(4) 75
(SSC CGL Tier-I (CBE) Exam. 02.09.2016) (IInd Sitting)

97. If '+' means '−' and '−' means '×', '×' means '÷' and '÷' means '+' then
2 ÷ 6 × 6 ÷ 2 = ?
(1) 1 　　　　(2) 0
(3) 10 　　　　(4) 5
(SSC CGL Tier-I (CBE) Exam. 03.09.2016) (IInd Sitting)

98. If + means ÷, ÷ means −, − means × and × means +, what will be the value of the following expression:
8 + 4 ÷ 3 × 5 − 9 = ?
(1) 44 　　　　(2) 53
(3) 62 　　　　(4) 64
(SSC CGL Tier-I (CBE) Exam. 06.09.2016) (Ist Sitting)

99. If × means −, + means ×, ÷ means + and − means ÷, then what is the value of the given expression?
175 − 25 ÷ 5 + 2 × 3 + 10 = ?
(1) 77 　　　　(2) 160
(3) 240 　　　(4) 2370
(SSC CGL Tier-I (CBE) Exam. 07.09.2016) (Ist Sitting)

100. If − stands for division, + for multiplication, ÷ for subtraction and × for addition, then which of the following equations is correct ?
(1) 20 − 4 + 6 ÷ 9 × 4 = 25
(2) 20 + 6 − 4 × 9 ÷ 6 = 32
(3) 20 ÷ 9 × 9 − 4 + 6 = 33
(4) 20 × 4 − 6 − 4 + 9 = 20
(SSC CGL Tier-I (CBE) Exam. 01.09.2016) (Ist Sitting)

101. In a certain code language, '@' represents '+', '⊕' represents '−', '*a*' represents '÷' and 'θ' represents '×'. Find out the answer to the following question :
8900*a*100⊕5θ4⊕121*a*11 = ?
(1) 58 　　　　(2) 62
(3) 158 　　　(4) 205
(SSC CGL Tier-I (CBE) Exam. 28.08.2016) (Ist Sitting)

102. If (−) stands for division, (+) stands for multiplication, (÷) stands for subtraction and (×) stands for addition, which one of the following equations is correct?
(1) 100 + 5 − 10 × 250 ÷ 200 = 100
(2) 200 + 10 − 20 × 200 ÷ 100 = 150
(3) 50 × 5 ÷ 10 + 100 − 75 = 50
(4) 300 + 5 − 20 × 200 ÷ 100 = 200
(SSC CGL Tier-I (CBE) Exam. 03.09.2016) (IIIrd Sitting)

103. If '−' means '×', '×' means '+', '+' means '÷' and '÷' means '−', then what will be the value of 40 × 12 + 3 − 6 ÷ 60 = ?
(1) 4 　　　　(2) 7
(3) 16 　　　　(4) 44
(SSC CGL Tier-I (CBE) Exam. 04.09.2016) (IIIrd Sitting)

104. If 25 + 5 ÷ 2 = 40, and 35 + 5 ÷ 2 = 60, then 45 + 5 ÷ 2 = ?
(1) 90 　　　　(2) 70
(3) 60 　　　　(4) 80
(SSC CGL Tier-I (CBE) Exam. 04.09.2016) (IIIrd Sitting)

105. If '+' means '÷', '÷' means '−', '−' means '×' and '×' means '+', then
48 + 16 × 4 − 2 ÷ 8 = ?
(1) 3 　　　　(2) 6
(3) 112 　　　(4) −28
(SSC CGL Tier-I (CBE) Exam. 09.09.2016) (IInd Sitting)

106. If ' + ' means minus , '−' means multiplication, '÷' means plus, and '×' means division, then
15 − 3 + 10 × 5 ÷ 5 = ?
(1) 52 　　　　(2) 48
(3) 22 　　　　(4) 5
(SSC CGL Tier-I (CBE) Exam. 11.09.2016) (IInd Sitting)

107. If '÷' stands for subtraction, '−' stands for addition, '×' stands for division and '+' stands for multiplication, then which one of the following equation is correct?

| SYMBOLS & NOTATIONS |

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(1) 35 ÷ 4 – 25 × 5 + 5 = 28
(2) 35 ÷ 4 – 25 × 5 + 5 = 61
(3) 35 ÷ 4 – 25 × 5 + 5 = 41
(4) 35 ÷ 4 – 25 × 5 + 5 = 56
(SSC CGL Tier-I (CBE)
Exam. 03.09.2016) (IInd Sitting)

108. If '+' means '×', '–' means '÷', '×' means '–' and '÷' means '+', then what will be the value of 16 ÷ 4 × 10 – 5 + 8 = ?
(1) 12   (2) 8
(3) 4   (4) 2
(SSC CGL Tier-I (CBE)
Exam. 07.09.2016) (IInd Sitting)

109. If '+' means '÷' , '–' means '×', '÷' means '+' and '×' means '–', then 36 × 12 + 4 ÷ 6 + 2 – 3 = ?

(1) 2   (2) $6\frac{1}{2}$

(3) 18   (4) 42
(SSC CGL Tier-I (CBE)
Exam. 08.09.2016) (IInd Sitting)

110. If '+' means '/', '/' means '–', '–' means '×', '×' means '+', then 24 + 8/26 × 6 = ?
(1) –10   (2) –3
(3) 12   (4) 21
(SSC CGL Tier-I (CBE)
Exam. 09.09.2016) (IInd Sitting)

111. If '+' means 'divided by', '–' means 'multiplied by', '×' means 'minus' and '÷' means 'plus', which of the following will be the value of the expression :
16 ÷ 8 – 4 + 2 × 4 = ?
(1) 16   (2) 28
(3) 32   (4) 44
(SSC CGL Tier-I (CBE)
Exam. 10.09.2016) (IInd Sitting)

112. If × means +, + means ÷, – means × and ÷ means –, then 8 × 7 – 8 + 40 ÷ 2 = ?

(1) 1   (2) $\frac{37}{5}$

(3) $8\frac{3}{5}$ (4) 44
(SSC CGL Tier-I (CBE)
Exam. 11.09.2016) (IInd Sitting)

113. Which of the following interchanges of numbers would make the given equation correct?
8 × 20 ÷ 3 + 9 – 5 = 38
(1) (8, 9)   (2) (3, 5)
(3) (3, 9)   (4) (3, 8)
(SSC CGL Tier-I (CBE)
Exam. 27.10.2016) (Ist Sitting)

114. If '+' stands for multiplication, '–' stands for addition, '×' stands for division and '÷' stands for subtraction, then which one of the following equations is correct ?
(1) 9 + 8 – 4 × 2 ÷ 18 = 56
(2) 9 × 8 + 4 ÷2 – 18 = 26
(3) 9 × 8 ÷ 4 + 2 – 18 = 200
(4) 9 – 8 × 4 + 2 ÷ 18 = 203
(SSC CGL Tier-I (CBE)
Exam. 27.10.2016) (IInd Sitting)

115. If – means ÷ , + means ×, ÷ means –, × means +, then which of the following equations is correct?
(1) 43 × 7 ÷ 5 + 4 – 8 = 25
(2) 48 ÷ 5 + 8 × 10 – 2 = 03
(3) 36 × 4 – 12 + 5 ÷ 3 = 420
(4) 42 + 5 ÷ 6 × 8 – 3 = 28
(SSC CGL Tier-I (CBE)
Exam. 31.08.2016) (IInd Sitting)

116. If 'P' means '+', 'Q' means '×', 'R' means '÷', and 'S' means '–', then 44Q9R12S6Q4P16 = ?
(1) 25   (2) 36
(3) 112   (4) 12
(SSC CGL Tier-I (CBE)
Exam. 02.09.2016) (IInd Sitting)

117. If ' + ' means minus , '–' means multiplication, '÷'means plus, and '×' means division, then
15 – 3 + 10 × 5 ÷ 5 = ?
(1) 52   (2) 48
(3) 22   (4) 5
(SSC CGL Tier-I (CBE)
Exam. 11.09.2016) (Ist Sitting)

118. If '+' means '×', '–' means '+', '×' means '÷' and '÷' means '–', then 12 × 2 + 6 – 7 ÷ 5 = ?
(1) 38   (2) 39
(3) 40   (4) 37
(SSC Multi-Tasking Staff
Exam. 30.04.2017 Ist Sitting)

TYPE–I (ii)

Directions (1) : In the following question you have to identify the correct response from the given premises stated according to following symbols.

1. If → stands for addition, ← stands for subtraction, ↑ stands for division, ↓ stands for multiplication, ↗ stands for equal to then which of the following alternatives is correct?
(1) 2 ↓ 5 ← 6 → 2 ↗ 6
(2) 5 → 7 ← 3 ↑ 2 ↗ 4
(3) 3 ↓ 6 ↑ 2 → 3 ← 6 ↗ 5
(4) 7 ← 43 ↑ 6 ↓ 1 ↗ 4
(SSC Combined Graduate Level Prelim
Exam.11.05.2003 (Ist Sitting)

TYPE–I (iii)

1. If 'a 'denotes '÷', 'b' denotes '+', 'c' denotes '–', 'b' denotes '×', then 24a6d4b9c8 = ?
(1) 2   (2) 17
(3) 34   (4) 19
(SSC Combined Matric Level (PRE)
Exam. 13.05.2001 (Ist Sitting)

2. A stands for 'addition', B for 'subtraction', C for 'division', D for 'multiplication', E for 'less than', F for 'greater than' and G for 'equal to'.
Out of the alternatives only one expression is correct according to the letter symbols. Identify that.
(1) 18 C 2 A 4 B 6 G 9
(2) 6 D 4 B 12 A 4 C 2 F 18
(3) 10 C 2 D 4 B 6 E 12
(4) 9 A 7 B 4 C 2 G 14
(SSC CPO Sub-Inspector
Exam. 03.09.2006)

3. If P denotes +, Q denotes –, R denotes ÷ and S denotes ×, then 18 S 36 R 12 Q 6 P 7 = ?
(1) 115   (2) 25

(3) 55   (4) $\frac{648}{13}$

(SSC CPO Sub-Inspector
Exam. 03.09.2006)

Directions (4-5) : In the following questions you have to identify the correct response from the given premises stated according to following symbols

'A' stands for 'equal to'
'B' stands for 'less than'
'C' stands for 'greater than'
'D' stands for 'not greater than'
'E' stands for 'not equal to'
'F' stands for 'not less than'
(SSC Combined Matric Level (PRE)
Exam. 24.10.1999 (Ist, IInd Sitting)

4. Premises (3XB2Y) and (2YDZ)
(1) 3 X A Z   (2) 3 X D Z
(3) 3 X F Z   (4) 3 X B Z

5. Premises : (7X B 3Y) and (6Y D 2Z)
(1) 7X C 2Z   (2) 7X B 2Z
(3) 7X D 2Z   (4) 7X A 2Z

6. If J represents +, K represents–, L represents ÷ and M represents ×, then
18 M 36 L 12 K 6 J 7 = ?

| SYMBOLS & NOTATIONS |

(1) 115   (2) 55

(3) $\dfrac{648}{18}$ (4) 25

7.

+	–	×	÷	=	>	<
B	G	E	C	D	A	F

Of the four alternatives only one expression has the correct relationship. Identify that and indicate your answer.

(1) 15 C 15 B 8 F 4 B 6 C 3
(2) 15 B 5 G 8 B 4 G 6 F 3
(3) 15 A 5 E 8 C 4 B 6 E 3
(4) 15 C 5 F 8 C 4 B 6 C 3

8. If A represents +, B represents –, C represents × and D represents ÷, then which of the following statements is true?

(1) 8B6D2A4C3   = 15
(2) 9C9B9D9A9   = 17
(3) 8A8B8C8   = – 48
(4) 3A3B3C3A3D3 = 4

9. If A means '×', D means '+' and G means '–', find the value of 7A4D4A3G2

(1) 28   (2) 38
(3) 44   (4) 48

10. If L = +, M = –, N = ×, P = ÷, then 5 N 5 P 5 L 5 M 5 = ?

(1) 0   (2) 5
(3) 10   (4) 15

11. If L → +, M → –, N → ×, P → ÷, then 14 N 10 L 42 P 2 M 8 = ?

(1) 153   (2) 216
(3) 248   (4) 251

12. Some symbols are represented by alphabets as

+	–	×	÷	=	>	<
B	G	E	C	D	A	F

of the four alternatives only one expression has the correct relationship. Indentify that :

(1) 18F 3B 6E 8G 4E 12
(2) 18C 3G 6B 8B 4D 12
(3) 18A 3E 6B 8G 4B 12
(4) 18C 3D 6B 8C 4G 12

13. If 'P' stands for '–', 'Q' stands for '×', 'R' for '÷' and 'S' for '+', then what is the value of the given equation?

14 Q 3 P 12 S 4 R 2 = ?

(1) 17   (2) 32
(3) 28   (4) 6

14. If L denotes ×, M denotes ÷, P denotes + and Q denotes –, then find the value of

16 P 24 M 8 Q 6 M 2 L 3 = ?

(1) 6   (2) 8
(3) 10   (4) 12

15. If A stands for 'addition', M for 'multiplication', D for 'division', G for 'greater than' and L for 'Lesser than' then which of the following will be logically correct?

(1) 20A 4D 4L 4A 6D2
(2) 20 D 5G 8D 4A 6M3
(3) 20D 4A 4L 4A 2M3
(4) 20A 2G 10M 3A 12D 2

16. X stands for +, Z stands for ÷, Y stands for –, and P stands for ×, then what is the value of 10 P 2 X 5 Y 5 ?

(1) 10   (2) 15
(3) 20   (4) 25

17. If 'P' means '+' 'Q' means '×' 'R' means '÷' and 'S' means '–', then :

44 Q 9 R 12 S 6 Q 4 P 16 = ?

(1) 25   (2) 112
(3) 36   (4) 124

18. If 'R' stands for '–', 'A' stands for '+', 'B' stands for '÷' and 'C' stands for '×', then what is the value, of the given equation? (BODMAS rule will not be applicable)

25 A 37 C 2 B 4 R 1 = ?

(1) 32   (2) 35
(3) 30   (4) 27

19. If P denotes ÷, Q denotes ×, R denotes + and S denotes –, then 12 Q 15 P 3 R 4 S 6 = ?

(1) 70   (2) 57
(3) 58   (4) 68

20. You have to follow the symbolic interpretation to solve the question.

+ = Greater than
× = Equal to
– = Not less than
L = Not equal to
| = Less than
φ = Not greater than

Then if A – B φ C, which of the following is implied ?

(1) A | B + C   (2) A | B | C
(3) A + B – C   (4) A φ B | C

21. If A stands for +, Q stands for –, V stands for ×, R stands for ÷, then what is the value of the given equation ?

225 R 5 A 64 Q 13 V 6 = ?

(1) 376   (2) 15
(3) 476   (4) 576

22. If 'P' denotes' 'multiplied by', 'T' denotes 'subtracted from', 'M' denotes 'added to' and 'B' denotes 'divided by' then : what should be the correct response of

12 P 6 M 15 T 16 B 4 ?

(1) 70   (2) 75
(3) 83   (4) 110

23. If + = Greater than, φ = Not greater than, – = Not less than, × = Equal to, | = Less than and L = Not equal to, then of A | B × C which of the following is true ?

(1) B + C | A   (2) C – B + A
(3) B | A C   (4) A φ B | C

24. Identify one response which would be a correct inference from the given premises stated according to the following symbols :

'A' stands for not greater than
'B' stands for equal to
'C' stands for less than

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'D' stands for not less than
'E' stands for not equal to
'F' stands for greater than
Premises (2 M B N) and (2N A 3K)
(1) 2M D 3K   (2) 2M B 3K
(3) 2M C 3K   (4) 2K B 3N

(SSC Graduate Level Tier-I
Exam. 19.05.2013, IInd Sitting)

25. 'B' stands for addition, 'G' stands for subtraction, 'E' stands for multiplication, 'C' stands for division, 'D' stands for equal to, 'A' stands for greater than, 'F' stands for less than. In each of the four alternatives, only one expression is correct according to the letter symbol. Identify that expression.
(1) 15 C 3 B 2 A 6 E 2
(2) 15 B 2 G 5 A 4 G 4
(3) 15 C 3 B 2 D 6 B 1
(4) 15 B 3 D 4 E 6

(SSC Graduate Level Tier-I
Exam. 21.04.2013, IInd Sitting)

26. If A denotes +, B denotes – and C denotes ×, then
(10 C 4) A (4 C 4) B 6 = ?
(1) 46   (2) 50
(3) 55   (4) 58

(SSC CHSL (10+2) DEO & LDC
Exam. 16.11.2014)

27. If P denotes +, Q denotes –, R denotes '÷', and S denotes ×, then: 18S36R12Q6P7 = ?
(1) 115   (2) 65
(3) 55   (4) 25

(SSC CGL Tier-I (CBE)
Exam.11.09.2016) (Ist Sitting)

28. If P denotes ÷, Q denotes ×, R denotes + and S denotes – then what is the value of 18Q12P4R5S6 ?
(1) 64   (2) 53
(3) 81   (4) 24

(SSC CGL Tier-I (CBE)
Exam. 01.09.2016) (Ist Sitting)

29. If A means +, B means ×, C means ÷, D means –, then the value of given equation will be
9A2B6D4C2
(1) 16   (2) 19
(3) 27   (4) 30

(SSC CGL Tier-I (CBE)
Exam. 04.09.2016) (Ist Sitting)

30. If D stands for ×, S stands for +, A stands for – and M stands for ÷, what is the value of the given expression
28 D 6 S 34 M 2 A 8 D 6 ?

(1) 558   (2) 3312
(3) 137   (4) 31

(SSC CGL Tier-I (CBE)
Exam. 30.08.2016) (IInd Sitting)

31. If 'A' stands for '+', 'B' stands for '–', 'C' stands for '×', what is the value of (10C4) A (4C4) B6 = ?
(1) 46   (2) 50
(3) 56   (4) 60

(SSC CGL Tier-I (CBE)
Exam. 31.08.2016) (IInd Sitting)

32. If *a* denotes ×, *b* denotes ÷, *c* denotes + and *d* denotes –, then 8 *a* 3 *c* 24 *b* 12 *d* 19 = ?
(1) 17   (2) 7
(3) 14   (4) 8

(SSC CGL Tier-I (CBE)
Exam. 02.09.2016) (Ist Sitting)

33. If A denotes –, C denotes ×, D denotes ÷, E denotes +, then 14C3A12E4D2 = ?
(1) 6   (2) 17
(3) 28   (4) 32

(SSC CGL Tier-I (CBE)
Exam. 01.09.2016) (IInd Sitting)

34. If A denotes '+', B denotes '–', C denotes '×' and D denotes '÷', then which of the following statement is true?
(1) 8B6D2A4C3 = 15
(2) 8A8B8C8 = – 48
(3) 9C9B9D9A9 = 17
(4) 3A3B3C3A3D3 = 4

(SSC CGL Tier-I (CBE)
Exam. 07.09.2016) (IIIrd Sitting)

35. If P denotes multiply, T denotes subtraction, M denotes addition, B denotes division then 28 B 7 P 8 T 6 M 4 = ?
(1) 28   (2) 30
(3) 32   (4) 34

(SSC CGL Tier-I (CBE)
Exam. 08.09.2016) (IIIrd Sitting)

36. If L denotes '×', M denotes '÷', P denotes '+' and Q denotes '–', then 16 P 24 M 8 Q 6 M 2 L 3

(1) $\dfrac{13}{6}$ (2) $\dfrac{-1}{6}$

(3) $14\dfrac{1}{2}$ (4) 10

(SSC CGL Tier-I (CBE)
Exam. 10.09.2016) (IIIrd Sitting)

37. If 'L' stands for '+', 'M' stands for '–', N stands for '×', P stands for '÷' then
14 N 10 L 42 P 2 M 8 = ?

(1) 153   (2) 216
(3) 248   (4) 251

(SSC CGL Tier-I (CBE)
Exam. 04.09.2016) (IInd Sitting)

38. If P denotes '÷', Q denotes '×', R denotes '+' and S denotes '–', then 18 Q 12 P 4 R 5 S 6 = ?
(1) 53   (2) 54
(3) 57   (4) 95

(SSC CGL Tier-I (CBE)
Exam. 06.09.2016) (IInd Sitting)

39. If "K" means "subtracted from", "L" means "divided by", "M" means "added to" and "D" means "multiplied by", then 96 L 4 K 6 M 11 D 9 = ?
(1) 117   (2) 125
(3) 120   (4) 145

(SSC CHSL (10+2) Tier-I (CBE)
Exam. 16.01.2017) (IInd Sitting)

TYPE–I (iv)

1. If X stands for addition, V stands for subtraction, U stands for 'equal to', Λ stands for division, Σ stands for multiplication, ʊ stands for greater than and σ stands for less than. State which expression is true.
(1) 3 X 8 V 2 U 12 Λ 3
(2) 13 V 12 X 9 V 2 ʊ 5 Σ 1
(3) 2 Σ 3 Σ 4 σ 51 Λ 3
(4) 3 Σ 2 Σ 4 U 2 X 7 V 3

(SSC SAS Exam. 26.06.2010 (Paper-I)

2. If +, –, ×, ÷, =, > and < are represented as δ, , γ, η, ω, β and α respectively, then which of the following is correct ?
(1) 3 γ 6 η 2 δ 8 • 4 ω 5
(2) 3 η 6 γ 2 δ 8 • 4 β 5
(3) 3 γ 6 • 2 δ 8 η 4 α 5
(4) 3 δ 6 • 2 γ 8 η 4 ω 5

(SSC CPO (SI, ASI & Intelligence
Officer) Exam. 28.08.2011 (Paper-I)

3. If 'S' is written as 'H', 'R' as '@', 'A' as '∇', 'M' as '#', 'T' as '$' and 'E' as '%'] then how is 'MASTER' written in that code ?
(1) #∇H$%@   (2) #∇$%@
(3) #∇$H%@   (4) #∇H%@$

(SSC CGL Tier-I Exam. 19.10.2014
TF No. 022 MH 3)

4. If # is the brother of @, ≠ is the daughter of @, $ is the sister of #, and & is the borther of ≠, then who is the uncle of & ?

| **SYMBOLS & NOTATIONS** |
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(1) $ (2) ≠

(3) @ (4) #

5. In the question given below, the symbols used are as

Δ = equal to

⊗ = not equal to

+ = greater than

∅ = less than

– = not less than

O = not greater than

Read the question and mark the correct response.

If X – Y – Z then it does not.

(1) X ⊗ Y Δ Z   (2) X O Y + Z

(3) X ∅ Y – Z   (4) X ∅ Y + Z

6. If $x\% \ y = y^2 – x^2$, $x \$ \ y = x \div y^2$, $x \# y = 2xy$, then value of $\{(13 \% 5) \$ 6\} \# 15$ is

(1) 480   (2) 720

(3) –360   (4) –120

7. In a certain code language, @ represents +, ⊕ represents '–', α represents '÷' and 'Θ' represents '×'. Find out the answer to the following question.

107 Θ 3 ⊕ 64 α 8 ⊕ 2 Θ 9 = ?

(1) 295   (2) 290

(3) 209   (4) 105

8. If 324 ⊕ 289 = 35, 441 ⊕ 484 = 43, then 625 ⊕ 400 = ?

(1) 431   (2) 413

(3) 341   (4) 143

9. If "#" means "subtraction", "&" means "division", "@" means "addition" and "%" means "multiplication", then

217 & 7 # 3 @ 2 % 7 = ?

(1) 21   (2) 19

(3) 22   (4) 42

TYPE–I (v)

1. If ⬡ = 6, △ = 3, ⌂ = 5, ◇ = 4, □ = 8, ▭ = 10, then

(□ × △) ÷ ◇ = ?

(1) ⬡   (2) ◇

(3) ▭   (4) △

2. If ▭ = 12

△ = 15

□ = 6

▱ = 4

◯ = 3

then (△ + ▭) ÷ ◯ ?

(1) 8   (2) 9

(3) 7   (4) 6

3. If ▭ = 12

△ = 15

□ = 6

▱ = 4

◯ = 3

then (▭ × ▱) ÷ □ = ?

(1) 8   (2) 10

(3) 12   (4) 14

4. If ▭ = 12, △ = 15, □ = 6, ▱ = 4, ◯ = 3, then write the answer in symbol :

△ + ◯ – □ = ?

(1) △   (2) ▭

(3) □   (4) ◯

5. If ▭ = 12

△ = 15

□ = 6

▱ = 4

◯ = 3

---

then write the answer in symbol

□ ÷ ▱ = ?

(1) ◯   (2) △

(3) ▱   (4) □

6. If rectangle = 12, triangle = 15, square = 6, parallelogram = 4 and circle = 3, solve the equation using the above values and answer in figures.

$$\frac{\text{rectangle} + \text{square}}{\text{triangle}} = ?$$

(1) $\frac{4}{5}$ (2) $\frac{3}{5}$

(3) $\frac{6}{5}$ (4) $\frac{2}{3}$

7. Certain numbers have symbols as given below.

1 2 3 4 5 6 7 8 9 0

◯ □ ([ ] ⊏ ⊐) ∩ ∪

What is the number indicated by these symbols ?

[ ] ∩ ∪ ⊏

(1) 5 6 9 0 7   (2) 4 5 0 9 6

(3) 4 5 9 0 6   (4) 4 7 0 9 5

8. Identify the symbols to be inserted to make the expression correct.

24 Δ 4 Δ 5 Δ 4

(1) × + ×   (2) = × +

(3) × + =   (4) + = ×

9. Select the missing symbol from the given order :

□◯W△I□◯W△I□◯?

(1) □   (2) △

(3) ◯   (4) W

10. If # means <; ◯ means >; □ means =; then which of the following follows definitely from a ◯ b # c □ d?

| SYMBOLS & NOTATIONS |

(1) $a \square c$ (2) $b \bigcirc d$

(3) $b \square d$ (4) b # d

11. If ' * ' means subtraction; '–' means division, ' $\square$ ' means addition and '%' means multiplication, then find the value of :

$13 \square 3 * 6 \% 8 – 4 \square 14 = ?$

(1) 18   (2) 14

(3) 12   (4) 8

TYPE–I (vi)

Directions : In the following question you have to identify the correct response from the given premises stated according to following symbols.

1. If $> = \div$, $< = +$, $^\wedge = –$, $\times = <$, $– = >$, $+ = =$ and $\vee = \times$

(1) $6 > 3 < 2 ^\wedge 4 \vee 8 – 13$

(2) $6 ^\wedge 3 < 2 \div 4 \vee 8 + 13$

(3) $6 \vee 3 ^\wedge 2 > 4 < 8 \times 13$

(4) $6 \vee 3 > 2 < 4 ^\wedge 8 \times 13$

2. If $> = \div$, $V = \times$, $< = +$, $^\wedge = –$, $+ = =$, $\times = <$, $– = >$

(1) $6 > 2 > 3 ^\wedge 8 \vee 4 + 13$

(2) $6 ^\wedge 2 < 3 > 8 < 4 – 13$

(3) $6 \vee 2 < 3 ^\wedge 8 > 4 \times 13$

(4) $6 > 2 \vee 3 < 8 ^\wedge 4 + 13$

3. If $\div$ stands for 'greater than'. $\times$ stands for 'addition' + stands for 'division', – stands for 'equal to', > stands for 'multiplication', = stands for 'less than', < stands for 'minus' then which of the following alternatives is correct?

(1) $5 > 2 < 1 – 3 \times 4 \times 1$

(2) $5 < 2 \times 1 \div 3 > 4 \times 1$

(3) $5 > 2 \times 1 – 3 > 4 < 1$

(4) $5 + 2 \times 1 = 3 + 4 > 1$

4. If $\times$ stands for addition, < for subtraction, + stands for division, > stands for multiplication, – stands for equation, $\div$ stands for greater than, and = stands for less than, state which of the following is true?

(1) $5 > 8 + 4 = 10 < 4 \times 8$

(2) $3 \times 4 > 2 – 9 + 3 < 3$

(3) $5 \times 3 < 3 \div 8 + 4 \times 1$

(4) $3 \times 2 < 4 \div 16 > 2 + 4$

5. If '+' stands for 'multiplication', '<' stands for 'division', '÷' stands for 's u b t r a c t i o n', '–' stands for 'addition' and '×' stands for 'greater than', identify which expression is correct.

(1) $20 – 4 \div 4 + 8 < 2 \times 26$

(2) $20 \times 8 + 15 < 5 \div 9 – 8$

(3) $20 < 2 + 10 \div 4 – 6 \times 100$

(4) $20 < 5 + 25 \div 10- – 2 \times 96$

6. In the following problem,

= stands for ÷

+ stands for –

× stands for =

– stands for >

> stands for +

< stands for ×

÷ stands for <

When these new symbols are substituted, only one will be wrong. Identify the **wrong** one.

(1) $4 \div 2 + 5 + 8 \times 5$

(2) $4 = 2 + 5 > 8 \times 5$

(3) $4 < 2 > 5 + 8 \times 5$

(4) $4 > 2 < 5 + 8 – 5$

7. If > denotes +, < denotes –, + denotes ÷, ^ denotes ×, – denotes =, × denotes > and = denotes <, choose the correct statement of the following.

(1) $13 > 7 < 6 + 2 = 3 ^\wedge 4$

(2) $9 > 5 > 4 – 18 + 9 > 16$

(3) $9 < 3 < 2 > 1 \times 8 ^\wedge 2$

(4) $28 + 4 ^\wedge 2 = 6 ^\wedge 4 + 2$

8. You have to follow the symbolic interpretation to solve the problem

+ = greater than

– = not less than

| = less than

φ = not greater than

× = equal to

∠ = not equal to

If $x \angle y + z$, which of the following implied ?

(1) $x \times y \mid z$ (2) $x – y \times z$

(3) $x \angle y \phi z$ (4) $x – y \angle z$

9. Identify the correct response from the given premises stated according to following symbols.

'A' stands for not less than ($\nless$)

'B' stands for not equal to ($\neq$)

'C' stands for not greater than ($\ngtr$)

'D' stands for greater than (>)

'E' stands for less than (<)

'F' stands for equal to (=)

Premises : 4YF3X and 3XF6Z

(1) 2 Y D 3 Z   (2) 2 Y E 3 Z

(3) 4 Y B 5 Z   (4) 2 Y F 3 Z

10. If '+' stands for '÷', '–' stands for '=', '×' stands for '+', '÷' stands for greater than, '=' stands for less than, '>' stands for multiplication and '<' stands for subtraction, then which of the following alternatives is correct?

(1) $5 \div 2 \times 1 = 3 + 4 > 1$

(2) $5 > 2 \times 1 – 3 > 4 < 1$

(3) $5 \times 2 < 1 – 3 < 4 \times 1$

(4) $5 < 2 \times 1 \div 3 > 4 \times 1$

11. If '+' means subtraction, '÷' means addition, '<' means multiplication and '>' means division, then find the value of the given statement. The value of $9 \div 7 < 8 > (4 > 2) + 5$ will be

(1) 32   (2) 18

(3) 16   (4) 11

12. If '+' means division, '–' means multiplication, '÷' means subtraction, '×' means addition and '<' means less than, then which of the following is false?

(1) $(10 + 2) \div 7 < (10 \div 7) + 2$

(2) $(10 – 7) \times 2 < (10 \times 2) – 7$

(3) $(10 \times 7) – 2 < (10 – 2) \times 7$

(4) $(10 \div 2) + 7 < (10 + 7) \times 2$

┤ SYMBOLS & NOTATIONS ├

TYPE–I (vii)

1. In the following question you have to identify the correct response from the given premises stated according to the following symbols.

   If ÷ stands for 'greater than', × stands for 'addition', + stands for 'division', – stands for 'equal to', > stands for 'multiplication', = stands for 'less than', < stands for 'minus', then which of the following alternatives is correct?

   (1) 3 + 2 < 4 ÷ 6 > 3 × 2
   (2) 3 × 2 < 4 ÷ 6 + 3 < 2
   (3) 3 > 2 < 4 – 6 × 3 × 2
   (4) 3 × 2 × 4 = 6 + 3 < 2

   (SSC Combined Graduate Level Prelim Exam. 11.05.2003 (IInd Sitting)

   Direction (2) : In the following question you have to identify the correct response from the given premises stated according to following symbols.

2. If '+' stands for 'division', '–' stands for 'equal to', '×' stands for 'addition', '÷' stands for 'greater than', '=' stands for 'less than', '>' stands for 'multiplication', and '<' stands for 'subtraction', then which of the following alternatives is correct ?

   (1) 5 + 2 × 1 = 3 + 4 > 1
   (2) 5 > 2 × 1 – 3 > 4 < 1
   (3) 5 × 2 < 1 – 3 < 4 × 1
   (4) 5 < 2 × 1 ÷ 3 > 4 × 1

   (SSC Combined Graduate Level Prelim Exam. 08.02.2004 (Ist Sitting)

3. If ® stands for +, ¬ stands for ®, stands for ÷ stands for ×, ↗ stands for = which one is correct ?

   (1) 2 ¯ 5 ¬ 6 ® 2 ↗ 6
   (2) 5 ® 7 ¬ 4 ¯ 2 ↗ 3
   (3) 3 ¯ 6 ¯ 2 ® 3 ¬ 6 ↗ 5
   (4) 7 ¬ 43 ¯ 6 ¯ 1 ↗ 4

   (SSC CPO Sub-Inspector Exam. 09.11.2008)

4. Some equations are solved on the basis of a certain system. Find out the correct answer for the unsolved equation on that basis.

   If 8 + 8 = 72, 5 + 5 = 30 and 7 + 7 = 56, what is 6 + 6 = ?

   (1) 40   (2) 42
   (3) 30   (4) 36

   (FCI Assistant Grade-II Exam. 22.01.2012 Paper-I)

5. Some equations are solved on the basis of a certain system. Find out the correct answer for the unsolved equation on that basis.

   If 3 ÷ 5 = 5, 4 ÷ 7 = 8, 8 ÷ 7 = 6 then, what should 9 ÷ 6 be ?

   (1) 4   (2) 9
   (3) 5   (4) 6

   FCI Assistant Grade-III Exam. 25.02.2012 (Paper-I) North Zone (Ist Sitting)

6. Some equations are solved on the basis of a certain system. On the same basis find out the correct answer for the unsolved equation.

   If 8 × 2 = 61 ; 8 × 5 = 04, what is 8 × 10 = ?

   (1) 80   (2) 08
   (3) 8   (4) 0

   FCI Assistant Grade-III Exam. 05.02.2012 (Paper-I) East Zone (IInd Sitting)

7. If SENT is written as '+ ^ × –' and ANT is written as '* × –', then how is TEN written in that code ?

   (1) × + –   (2) – ^ ×
   (3) * – ×   (4) – × ^

   (SSC Graduate Level Tier-I Exam. 19.05.2013, Ist Sitting)

8. Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

   5 + 7 + 2 = 725, 6 + 9 + 0 = 906, 8 + 4 + 3 = ?

   (1) 815   (2) 384
   (3) 438   (4) 834

   (SSC Multi-Tasking (Non-Tech.) Staff Exam. 16.02.2014)

9. Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

   7 – 4 – 1 = 714,
   9 – 2 – 3 = 932
   8 – 0 – 4 = ?

   (1) 804   (2) 840
   (3) 408   (4) 480

   (SSC Multi-Tasking Staff (Patna) Exam. 16.02.2014)

10. Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

    678 = 366, 567 = 255, 946 = ?

    (1) 334   (2) 499
    (3) 699   (4) 634

    (SSC Multi-Tasking (Non-Tech.) Staff Exam. 23.02.2014, IInd Sitting)

11. If 1 + 4 = 9, 2 + 8 = 18, 3 + 6 = 15 then 7 + 8 = ?

    (1) 41   (2) 23
    (3) 30   (4) 32

    (SSC CGL Tier-I Re-Exam–2013, 27.04.2014)

12. Some equations are solved on the basis of a certain system. Find the correct answer for the un-solved equation on that basis.

    4 × 5 = 42,
    5 × 6 = 56,
    6 × 7 = 72,
    7 × 8 = ?

    (1) 84   (2) 90
    (3) 92   (4) 102

    (SSC CAPFs SI, CISF ASI & Delhi Police SI Exam. 22.06.2014)

13. Some equations are solved on the basis of a certain system. Find the correct answer for the un-solved equation on that basis.

    58 × 12 = 4, 37 × 96 = 5, 11 × 20 = 2, 42 × 12 = ?

    (1) 2   (2) 3
    (3) 4   (4) 5

    (SSC GL Tier-I Re-Exam. (2013) 20.07.2014, Ist Sitting)

14. Some equations are solved on the basis of a certain system. Find the correct answer for the un-solved equation on that basis.

    5 × 8 = 28, 3 × 7 = 12, 8 × 6 = 35, 13 × 13 = ?

    (1) 169   (2) 130
    (3) 140   (4) 144

    (SSC GL Tier-I Re-Exam. (2013) 20.07.2014, IInd Sitting)

    Directions (15–16) : In each of the following questions, some equations are solved on the basis of certain system. Find out the correct answer for the unsolved equation on that basis.

    (SSC GL Tier-I Exam. 19.10.2014, Ist Sitting)

15. 2 × 4 × 6 = 4; 9 × 3 × 7 = 13; 4 × 7 × 6 = 3; 9 × 7 × 8 = ?

    (1) 10   (2) 09
    (3) 08   (4) 07

16. 3 × 5 × 7 × 2 = 24, 2 × 4 × 6 × 8 = 22, 4 × 4 × 8 × 9 = ?

    (1) 33   (2) 25
    (3) 144   (4) 1152

┤ SYMBOLS & NOTATIONS ├

17. If $7 \times 8 = 49$, $4 \times 4 = 12$ and $6 \times 4 = 18$, what will 9×6 be ?
(1) 54
(2) 50
(3) 45
(4) None of the above

(SSC GL Tier-I Exam. 19.10.2014)

18. Some equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

$5 \odot 3 = -7$; $3 \odot 7 = -11$; $7 \odot 11 = ?$
(1) – 59
(2) 77
(3) – 15
(4) 18

(SSC GL Tier-I Exam. 26.10.2014)

19. Some equations are solved on the basis of a certain system. On the same basis, find out the correct answer for the unsolved equation.
$2 \times 3 \times 4 = 432$,
$5 \times 6 \times 7 = 765$
$7 \times 8 \times 9 = 987$
$2 \times 5 \times 7 = ?$
(1) 572
(2) 752
(3) 725
(4) 257

(SSC CHSL (10+2) DEO & LDC Exam. 09.11.2014)

20. If $2 \times 16 = 8$; $8 \times 8 = 1$; $6 \times 12 = 2$, then $12 \times 144 = ?$
(1) 11
(2) 12
(3) 16
(4) 24

(SSC CHSL (10+2) DEO & LDC Exam. 16.11.2014, Patna Region : (Ist Sitting)

21. Some equations are solved on the basis of a certain system. Using the same, solve the unsolved equation.
If $10 - 3 = 12$, $12 - 4 = 13$, $14 - 5 = 14$, then $16 - 6 = ?$
(1) 10
(2) 15
(3) 16
(4) 18

(SSC CHSL (10+2) DEO & LDC Exam. 16.11.2014, Patna Region : (Ist Sitting)

22. If 1 candle in box number 1 is placed in box number 2, then box – 2 has twice the number of candles that box 1 has. If 1 candle from box-2 is placed in box-1, then box-2 and box-1 have the same number of candles.
How many candles were there in box-1 and box-2 ?

Box – 1   Box – 2

(1) ⎡5⎤   :   ⎡3⎤

(2) ⎡7⎤   :   ⎡5⎤

(3) ⎡6⎤   :   ⎡4⎤

(4) ⎡5⎤   :   ⎡7⎤

(SSC CGL Tier-I Exam. 19.10.2014 TF No. 022 MH 3)

23. If 0, 1, 2, 3, ..., 9 is written as a, b, c, d, ..., j then find $dc \times f - (bf - d) \times d$.
(1) bcf
(2) abe
(3) abb
(4) bce

(SSC CHSL (10+2) LDC, DEO & PA/SA Exam, 20.12.2015 (Ist Sitting) TF No. 9692918)

24. Some equations have been solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.
If $29 \times 13 = 14$, $76 \times 26 = 34$, then $64 \times 14 = ?$
(1) 39
(2) 32
(3) 26
(4) 54

(SSC (10+2) Stenographer Grade 'C' & 'D' Exam. 31.07.2016)

25. If $4 \times 5 \times 2 = 524$, $3 \times 7 \times 2 = 723$ and $6 \times 8 \times 7 = 876$ then $9 \times 4 \times 5 = ?$
(1) 495
(2) 459
(3) 549
(4) 954

(SSC CGL Tier-I (CBE) Exam.10.09.2016)

26. Some equations have been solved on the basis of certain system. Find the correct answer for the unsolved equation on that basis.
If $98 - 39 - 27 = 31$, $87 - 38 - 34 = 20$, then $79 - 25 - 12 = ?$
(1) 51
(2) 22
(3) 42
(4) 15

(SSC CGL Tier-I (CBE) Exam.11.09.2016) (Ist Sitting)

27. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$53 - 34 = 5334$
$65 - 46 = 6456$
$75 - 24 = ?$
(1) 7542
(2) 7524
(3) 7452
(4) 7254

(SSC CHSL (10+2) Tier-I (CBE) Exam. 08.09.2016) (Ist Sitting)

28. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$6 \times 2 \times 9 = 269$
$8 \times 7 \times 1 = 781$
$4 \times 1 \times 3 = ?$
(1) 431
(2) 413
(3) 341
(4) 143

(SSC CGL Tier-I (CBE) Exam. 09.09.2016) (Ist Sitting)

29. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$3 \times 4 \times 5 = 435$
$4 \times 3 \times 2 = 342$
$2 \times 3 \times 4 = ?$
(1) 324
(2) 342
(3) 432
(4) 243

(SSC CGL Tier-I (CBE) Exam. 27.08.2016) (Ist Sitting)

30. If $17 + 17 = 2895$
$18 + 18 = 3245$
$19 + 19 = 3615$
then, $23 + 23 = ?$
(1) 5765
(2) 5295
(3) 2565
(4) 4005

(SSC CGL Tier-I (CBE) Exam. 27.08.2016) (IInd Sitting)

31. If $24 \times 2 = 84$, and $32 \times 3 = 69$, then $13 \times 3 = ?$
(1) 38
(2) 93
(3) 16
(4) 10

(SSC CGL Tier-I (CBE) Exam. 31.08.2016) (Ist Sitting)

32. If $4 + 3 = 25$ and $8 + 4 = 80$, then, $3 + 2 = ?$
(1) 15
(2) 10
(3) 13
(4) 12

(SSC CGL Tier-I (CBE) Exam. 01.09.2016) (Ist Sitting)

33. If $12 \times 16 = 188$ and $14 \times 18 = 248$, then find the value of $16 \times 20 = ?$
(1) 320
(2) 360
(3) 316
(4) 318

(SSC CGL Tier-I (CBE) Exam. 02.09.2016) (Ist Sitting)

34. If $64 + 7 = 460$
$43 + 8 = ?$
$25 + 8 = 212$
(1) 360
(2) 376
(3) 332
(4) 356

(SSC CGL Tier-I (CBE) Exam. 02.09.2016) (IInd Sitting)

⊢ SYMBOLS & NOTATIONS ⊣

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35. If $6 \times 9 \times 3 = 963$ and $4 \times 8 \times 5 = 845$, then $9 \times 4 \times 7 = ?$
(1) 974   (2) 479
(3) 497   (4) 749
(SSC CGL Tier-I (CBE)
Exam. 03.09.2016) (IInd Sitting)

36. If, $4 \times 3 = 14$; $5 \times 4 = 18$; $6 \times 5 = 22$, then find the value of 7×6.
(1) 20   (2) 26
(3) 30   (4) 42
(SSC CGL Tier-I (CBE)
Exam. 04.09.2016) (Ist Sitting)

37. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$8 \times 5 \times 0 = 805$, $7 \times 4 \times 6 = 764$, $6 \times 8 \times 9 = ?$
(1) 689   (2) 698
(3) 968   (4) 986
(SSC CGL Tier-I (CBE)
Exam. 06.09.2016) (Ist Sitting)

38. If $34 = 39304$, $27 = 19683$, then $13 = ?$
(1) 2197   (2) 10648
(3) 56743   (4) 17576
(SSC CAPFs (CPO) SI & ASI,
Delhi Police Exam. 05.06.2016)
(Ist Sitting)

39. If $1 \times 3 \times 5 = 1925$ and $7 \times 9 \times 11 = 4981121$, then find the value of $19 \times 21 \times 23 = ?$
(1) 361529441 (2) 361441289
(3) 441361289 (4) 361441529
(SSC CGL Tier-I (CBE)
Exam. 01.09.2016) (Ist Sitting)

40. Given equations are solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis :
$2 + 4 + 6 = 48$ and $3 + 2 + 8 = 48$, then $2 + 5 + 7 = ?$
(1) 48   (2) 70
(3) 14   (4) 59
(SSC CGL Tier-I (CBE)
Exam. 02.09.2016) (Ist Sitting)

41. Some equations are solved on the basis of a certain system. On the same basis, find out the correct answer from amongst the four alternatives to the unsolved equation.
$1 \times 2 \times 3 = 231$
$3 \times 4 \times 5 = 453$
$5 \times 6 \times 7 = ?$
(1) 657   (2) 675
(3) 756   (4) 765
(SSC CGL Tier-I (CBE)
Exam. 28.08.2016) (Ist Sitting)

42. If $5 \times 4 \times 0 = 405$
$3 \times 2 \times 8 = 283$
then $1 \times 7 \times 6 = ?$
(1) 617   (2) 716
(3) 167   (4) 761
(SSC CGL Tier-I (CBE)
Exam. 30.08.2016) (IInd Sitting)

43. If $56 \times 11 = 9$, $37 \times 13 = 6$, $42 \times 12 = 3$, then find the value of 87×77.
(1) 1   (2) 2
(3) 3   (4) 4
(SSC CGL Tier-I (CBE)
Exam. 30.08.2016) (IInd Sitting)

44. Some equations are solved on the basis of certain system. Find out the correct answer for unsolved equation on that basis :
$4 \times 5 \times 8 = 584$
$7 \times 3 \times 9 = 397$
$9 \times 7 \times 3 = ?$
(1) 397   (2) 793
(3) 973   (4) 739
(SSC CGL Tier-I (CBE)
Exam. 31.08.2016) (IInd Sitting)

45. If $879 = 8$, $625 = 1$, $586 = 9$, then $785 = ?$
(1) 6   (2) 7
(3) 8   (4) 9
(SSC CGL Tier-I (CBE)
Exam. 01.09.2016) (IInd Sitting)

46. If $84 + 96 = 4842$,
then $36 + 78 = ?$
(1) 3918   (2) 3678
(3) 3819   (4) 1839
(SSC CGL Tier-I (CBE)
Exam. 02.09.2016) (IInd Sitting)

47. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$462 = 551$
$398 = 487$
$856 = ?$
(1) 745   (2) 773
(3) 945   (4) 743
(SSC CGL Tier-I (CBE)
Exam. 07.09.2016) (IIIrd Sitting)

48. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$7 \times 5 \times 6 = 576$,
$4 \times 2 \times 5 = 245$,
$8 \times 2 \times 5 = ?$
(1) 258   (2) 285
(3) 582   (4) 852
(SSC CGL Tier-I (CBE)
Exam. 08.09.2016) (IIIrd Sitting)

49. A certain system is followed to solve the problem . Accordingly find out the correct answer from the alternatives for the unsolved equation.
$7 \times 4 \times 9 = 479$
$9 \times 5 \times 2 = 592$
$6 \times 9 \times 5 = 965$
$8 \times 6 \times 2 = ?$
(1) 286   (2) 682
(3) 628   (4) 268
(SSC CGL Tier-I (CBE)
Exam. 11.09.2016) (IInd Sitting)

50. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.
$15 \times 26 = 6512$
$29 \times 36 = 6923$, $46 \times 54 = ?$
(1) 5464   (2) 4645
(3) 4564   (4) 4465
(SSC CGL Tier-I (CBE)
Exam. 03.09.2016) (IInd Sitting)

51. If $23 \times 16 = 184$, $37 \times 10 = 185$, then $85 \times 12 = ?$
(1) 511   (2) 610
(3) 510   (4) 410
(SSC CGL Tier-I (CBE)
Exam. 06.09.2016) (IInd Sitting)

52. Some equations are solved on the basis of certain system. Find the correct answer for the unsolved equation on that basis.
$5 \times 4 \times 3 = 70$,
$6 \times 5 \times 4 = 140$
$7 \times 6 \times 5 = ?$
(1) 210   (2) 220
(3) 230   (4) 240
(SSC CGL Tier-I (CBE)
Exam. 07.09.2016) (IInd Sitting)

53. Some equations have been solved on the basis of a certain pattern. Find the correct answer for the unsolved equation on that basis.
$8 \times 7 \times 6 = 765$
$5 \times 3 \times 2 = 421$
$9 \times 6 \times 4 = ?$
(1) 583   (2) 853
(3) 841   (4) 481
(SSC CGL Tier-I (CBE)
Exam. 08.09.2016) (IInd Sitting)

─────────┤ **SYMBOLS & NOTATIONS** ├─────────

54. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.

$7 \times 6 \times 8 = 678$

$8 \times 9 \times 7 = 987$

$6 \times 5 \times 7 = 567$

$5 \times 4 \times 6 = ?$

(1) 456   (2) 564

(3) 645   (4) 654

(SSC CGL Tier-I (CBE) Exam. 09.09.2016) (IInd Sitting)

55. If, $6 \times 4 = 12$

$4 \times 12 = 24$

$12 \times 6 = 36$ then $6 \times 9 = ?$

(1) 35   (2) 24

(3) 27   (4) 31

(SSC CGL Tier-I (CBE) Exam. 11.09.2016) (IInd Sitting)

56. Some equations have been solved on the basis of certain system. Find out the correct answer for the unsolved equation on that basis.

$9 \times 7 \times 4 = 794$, $3 \times 4 \times 6 = 436$, $4 \times 2 \times 7 = ?$

(1) 742   (2) 247

(3) 724   (4) 472

(SSC CGL Tier-I (CBE) Exam. 27.10.2016) (Ist Sitting)

57. In this question, some equations are solved on the basis of a certain system. On the same basis find out the correct answer from amongst the four alternatives for the unsolved equation.

$8 + 5 - 5 = 45$

$12 + 6 - 5 = 77$

$14 + 5 - 10 = ?$

(1) 60   (2) 80

(3) 58   (4) 76

(SSC CGL Tier-I (CBE) Exam. 27.10.2016) (IInd Sitting)

58. A certain system is followed to solve the problem . Accordingly find out the correct answer from the alternatives for the unsolved equation.

$7 \times 4 \times 9 = 479$

$9 \times 5 \times 2 = 592$

$6 \times 9 \times 5 = 965$

$8 \times 6 \times 2 = ?$

(1) 286   (2) 682

(3) 628   (4) 268

(SSC CGL Tier-I (CBE) Exam. 11.09.2016) (Ist Sitting)

TYPE–II

1. Which one of the following is correct?

$6 * 3 * 4 * 45$

(1) ÷, +, >   (2) ÷, >, +

(3) >, ÷, +   (4) +, >, ÷

(SSC Combined Graduate Level Prelim Exam. 27.07.2008 (Second- Sitting)

2. In the following question, * stands for any of the mathematical signs at different places, which are given as choices under each question. Select the choice with the correct sequence of signs which when substituted makes the question as a correct equation.

$24 * 4 * 5 * 4$

(1) × + =   (2) = × +

(3) + × =   (4) = + ×

(SSC Combined Graduate Level Tier-1 Exam. 16.05.2010 (Ist Sitting)

3. $25 * 2 * 6 = 4 * 11 * 0$

Which set of symbols can replace * ?

(1) ×, −, ×, +   (2) +, −, ×, +

(3) ×, +, ×, −   (4) ×, +, +, ×

(SSC Combined Graduate Level Tier-1 Exam. 16.05.2010 (IInd Sitting)

4. Which one of the following responses is correct ?

$8 * 5 * 27 * 3 * 16$

(1) ×, =, − , +   (2) −, =, ×, +

(3) ×, =, +, −   (4) +, −, =, ×

(SSC CISF ASI Exam. 29.08.2010 (Paper-I)

5. Which one of the following is correct ?

$96 * 6 * 8 * 2$

(1) ÷, =, ×   (2) ×, =, ÷

(3) =, ÷, ×   (4) =, ×, ÷

(SSC CPO Sub-Inspector Exam. 12.12.2010 (Paper-I)

Directions (6-7) : What should be the correct signs of the equation to arrive at the given answer ?

(SSC Combined Matric Level (PRE) Exam. 21.05.2000 (Ist Sitting (East Zone)

6. $17 * 3 * 6 = 45$

(1) ×, =, −   (2) −, ×, =

(3) =, ×, −   (4) ×, −, =

7. $3 * 2 * 1 * 7$

(1) ×, +, =   (2) +, ×, =

(3) =, ×, +   (4) ×, =, +

Direction (8) : In the following question you have to identify the correct response from the given premises stated according to following symbols.

(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (Ist Sitting)

8. $12 * 3 * 4 * 8 * 0$

(1) − + +   (2) ÷ + ÷

(3) − − −   (4) ÷ + −

9. Which alternative clearly indicates the rule followed in the following set of numbers?

$7 * 4 * 8 * 2 \quad * \quad 24$

(1) −, ×, ×   (2) −, ×, ÷

(3) ×, −, ÷   (4) ×, ÷, −

(SSC Combined Matric Level (PRE) Exam. 13.05.2001 (IInd Sitting)

10. Select the correct set of symbols which will fit in the given equation $5 * 0 * 3 * 5 * 20$

(1) + − ×   (2) × + ×

(3) − + ×   (4) × × ×

(SSC Combined Matric Level (PRE) Exam. 27.05.2001 (IInd Sitting (East Zone)

Directions (11-12) : Select the correct set of symbols which will fit in the given equation.

SSC Combined Matric Level (Pre) Exam. 05.05.2002 (IInd Sitting) (North Zone Delhi)

11. $23 * 26 * 27$

(1) + 3 =; × 1 =

(2) × 3 =; × 1 =

(3) + 3 =; + 1 =

(4) × 3 =; + 1 =

12. $65 * 40 * 11 * 36$

(1) − and +   (2) × and ÷

(3) ÷ and +   (4) + and ×

13. Choose proper signs for sequential operations to produce the resultant figure:

$31 * 1 * 2 * 1 \rightarrow 16$

(1) × ÷ × =   (2) − + ÷ =

(3) + − × =   (4) − ÷ + =

SSC Combined Matric Level (Pre) Exam. 12.05.2002 (Ist Sitting)

14. The symbols for addition (+), subtraction (−), multiplication (×) and division (÷) will have to be inserted in the blank * in order to get answer 3 as shown in the equation :

$20 \boxed{*} 5 \boxed{*} 8 \boxed{*} 2 \boxed{*} 17 = 3$

┤ SYMBOLS & NOTATIONS ├

Find out which set below is correct.

(1) − + ÷ ×   (2) + − × ÷

(3) × − ÷ +   (4) ÷ + × −

15. In the following equation, select correc combination of mathematical sings to replace * signs and to balance the equation

16 * 4 * 5 * 9 * 1

(1) + ÷ = ×   (2) ÷ + = ×

(3) × = + −   (4) + × = ÷

16. Select the correct combination of mathematical signs to replace * signs and to balance the following equation.

7 * 5 * 5 * 4 * 10

(1) +   ÷   −   =

(2) ×   −   =   ×

(3) ×   +   =   ×

(4) +   ×   ÷   =

17. If 34 * 12 = 23, 28 * 76 = 52, 97* 39 = 68 then what should 37 *73 be ?

(1) 32   (2) 25

(3) 86   (4) 55

18. Select the correct combination of mathematical signs to replace * signs so as to balance the equation.

8 * 8 * 1 * 11 * 11

(1) + = ÷ −   (2) × + = ÷

(3) ÷ × + =   (4) − + = ÷

19. Substitute the correct mathematical symbols in place of * in the following equation:

16 * 4 * 5 * 14 * 6

(1) ÷ − = ×   (2) − × + =

(3) ÷ × = +   (4) ÷ + = −

20. Substitute the arithmetical signs in the place of * in the following equation :

7 * 7 * 2 * 1 = 12

(1) × − ÷   (2) + − ×

(3) × − +   (4) + × −

21. Some equations have been solved on the basis of a certain system. Find the correct answer for the unsolved equation on that basis.

If 9 * 7 = 32, 13 * 7 = 120, 17 * 9 = 208, then 19 * 11 = ?

(1) 150   (2) 180

(3) 210   (4) 240

22. Which sequence of mathematical symbols can replace * in the given equation :

8 * 5 * 9 * 31

(1) − × =   (2) − = ×

(3) = × −   (4) × − =

23. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

4 * 6 * 6 * 2 * 20

(1) + ÷ = ÷   (2) × − + =

(3) + − = ÷   (4) − + = ÷

24. Select the correct combination of mathematical signs to replace signs and to balance the given equation.

8   5   2   72   4

(1) = × + ÷   (2) × = + ÷

(3) × + = ÷   (4) + × = ÷

25. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

15 * 3 * 5 * 20 * 2

(1) + − = ÷   (2) × − = ×

(3) + = + ×   (4) × − = ÷

26. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

2 * 3 * 2 * 4 * 8

(1) + − + =   (2) × − + =

(3) − + × =   (4) × + − =

27. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

16 * 2 * 24 * 3 * 6

(1) + = − ÷   (2) × − + =

(3) + ÷ = ÷   (4) − − ÷ =

28. Select the correct combination of mathematical signs to replace * signs and to balance the given equation

16 * 4 * 3 * 4 * 13

(1) ÷ × − =   (2) × − + =

(3) + = ÷ ×   (4) − × ÷ =

29. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

6 * 15 *10 * 3 * 12

(1) ÷ + = ×   (2) + ÷ × =

(3) × ÷ + =   (4) + − = ÷

30. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

18*6 * 3 * 12* 24

(1) ÷ − = ×   (2) × ÷ − =

(3) + ÷ × =   (4) × = ÷ +

31. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

16 * 4 * 64 * 4

(1) ×, <, ÷   (2) ×, >, ÷

(3) ÷, >, ×   (4) ×, >, +

---| **SYMBOLS & NOTATIONS** |---

32. Select the correct combination of mathematical signs to replace * signs and to balance the given equation :

28 * 4 * 9 * 16

(1) ÷ + =   (2) + ÷ =

(3) − × +   (4) − = ×

FCI Assistant Grade-III Exam. 25.02.2012 (Paper-I) North Zone (Ist Sitting)

33. Select the correct combination of mathematical signs to replace* signs and to balance the given equation.

16 * 6 * 4 * 24

(1) ÷ = ×   (2) × = ÷

(3) = ÷ ÷   (4) × ÷ =

FCI Assistant Grade-III Exam. 05.02.2012 (Paper-I) East Zone (IInd Sitting)

34. Choose the appropriate combination of signs to solve.

16*8*1*8

(1) = − ÷   (2) − ÷ =

(3) ÷ − =   (4) ÷ = −

(SSC (10+2) Level Data Entry Operator & LDC Exam. 04.11.2012, Ist Sitting)

35. Select the correct combination of mathematical signs to replace * signs and to balance the following equation —

9 * 3 * 3 * 3 * 6

(1) ÷ × − =   (2) + − × =

(3) − + + =   (4) × + − =

(SSC Constable (GD) Exam. 12.05.2013 Ist Sitting)

36. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

8 * 6 * 96 * 2 = 0

(1) × ÷ −   (2) × − ÷

(3) − × ÷   (4) ÷ − ×

(SSC Graduate Level Tier-I Exam. 19.05.2013, Ist Sitting)

37. If 264 * 2 = 6, 870 * 3 = 11, then what should 735 * 5 be ?

(1) 05   (2) 12

(3) 16   (4) 03

(SSC Graduate Level Tier-I Exam. 19.05.2013, Ist Sitting)

38. Find the correct group of signs to solve the equation.

24 * 16 * 8 * 32

(1) + − =   (2) ÷ − =

(3) − + =   (4) × ÷ =

(SSC Graduate Level Tier-I Exam. 19.05.2013, Ist Sitting)

39. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

15 * 24 * 3 * 6 * 17

(1) − ÷ + =   (2) + ÷ − =

(3) + × = ÷   (4) − × = +

(SSC Graduate Level Tier-I Exam. 19.05.2013, Ist Sitting)

40. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

5 * 5 * 5 * 3 * 10

(1) × + = ×   (2) + − × =

(3) + ÷ = ×   (4) + ÷ × =

(SSC CAPFs SI & CISF ASI Exam. 23.06.2013)

41. Select the correct combination of mathematical signs to replace signs and to balance the following equation:

21 * 7 * 6 * 9

(1) + ÷ =   (2) ÷ + =

(3) = + ÷   (4) ÷ = +

(SSC Multi-Tasking (Non-Tech.) Staff Exam. 16.02.2014)

42. Select the correct combination of mathematical signs to replace * signs and to balance the following equation :

6 * 4 * 12 * 12

(1) ÷ − =   (2) + − ÷

(3) = − ÷   (4) × − =

(SSC Multi-Tasking Staff (Patna) Exam. 16.02.2014)

43. Select the correct combination of mathematical signs to replace * signs and to balance the following equation :

8 * 8 * 1 * 7 = 8

(1) × ÷ +   (2) + ÷ ×

(3) ÷ × +   (4) + × ÷

(SSC Multi-Tasking (Non-Tech.) Staff Exam. 23.02.2014, IInd Sitting)

44. Insert the arithmetic operations in the following numerical figures :

13 * 3 * 4 * 3 = 4

(1) ÷ × +   (2) − × +

(3) + × ÷   (4) + ÷ ×

(SSC CGL Tier-I Re-Exam–2013, 27.04.2014)

45. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

2 * 4 * 3 * 4 * 9

(1) + × = −   (2) × ÷ − =

(3) × − + =   (4) + − = ÷

(SSC CGL Tier-I Re-Exam–2013, 27.04.2014)

46. Some equations are solved on the basis of a certain system. Find the correct answer for the un-solved equation on that basis.

5 * 6 = 35, 8 * 4 = 28, 6 * 8 = ?

(1) 46   (2) 34

(3) 23   (4) 38

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam. 22.06.2014)

47. Select the correct combination of mathematical signs to replace * signs and to balance the following equation.

12 * 3 * 4 = 6 * 8 * 8

(1) +, ×, −, ×   (2) ×, +, −, ×

(3) ×, +, ×, −   (4) ×, −, ×, +

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam. 22.06.2014)

48. Select the correct combination of mathematical signs to replace * signs and to balance the following equation :

5 * 9 * 3 * 6 * 8

(1) × + = ×   (2) × − = ×

(3) + ÷ − =   (4) + × ÷ =

(SSC CAPFs SI, CISF ASI & Delhi Police SI Exam. 22.06.2014)

49. Select the correct combination of mathematical signs to replace * signs and to balance the given equation

33 * 11 * 3 * 6 = 115

(1) + − ×   (2) × ÷ −

(3) ÷ × −   (4) − × ÷

(SSC GL Tier-I Re-Exam. (2013) 20.07.2014, Ist Sitting)

50. Select the correct combination of mathematical signs to replace * signs and to balance the given equation :

13 * 12 * 5 * 4

(1) = − +   (2) = + −

(3) + − =   (4) − = +

(SSC GL Tier-I Re-Exam. (2013) 20.07.2014, IInd Sitting)

51. Some equations have been solved on the basis of a certain operation. Find the correct answer for the unsolved equation on that basis.

If 73 * 17 = 45 and 68 * 40 = 54, then 83 * 15 = ?

┤ SYMBOLS & NOTATIONS ├

(1) 49   (2) 64

(3) 69   (4) 79

(SSC GL Tier-I Exam. 19.10.2014)

52. Select the correct combination of mathematical signs to replace * signs and to balance the following equation :

$(\sqrt{121} \ * \ 9) \ * \ 5 \ * \ 4 \ * \ 1$

(1) – + × =   (2) + ÷ × =

(3) = + × ÷   (4) – × + =

(SSC GL Tier-I Exam. 19.10.2014)

53. Select the correct combination of mathematical signs to replace the * signs and to balance the following equation :

45 * 3 * 6 * 2 * 16

(1) + × ÷ =   (2) + ÷ × =

(3) + × – =   (4) + + – =

(SSC CGL Tier-I Exam. 19.10.2014 TF No. 022 MH 3)

54. Select the correct combination of mathematical signs to replace * signs and to balance the following equation :

8 * 5 * 10 * 2 * 25

(1) + × ÷ =   (2) + ÷ – =

(3) × + = ×   (4) × – = ×

(SSC CGL Tier-I Exam. 19.10.2014 TF No. 022 MH 3)

55. Select the correct combination of mathematical signs to replace * signs and to balance the given equation.

5 * 3 * 3 * 5 * 0

(1) × ÷ – =   (2) + – ÷ =

(3) – – + =   (4) – × ÷ =

(SSC CHSL (10+2) DEO & LDC Exam. 16.11.2014, IInd Sitting TF No. 545 QP 6)

56. If '+' means '–', '–' means '×','×' means '÷' and '÷' means '+', which combination will give you the value of '0' in 42 * 4 * 12 * 20 * 9 ?

(1) – ÷ × +   (2) ÷ + – ×

(3) + – ÷ ×   (4) × – ÷ +

(SSC CGL Tier-I Exam, 16.08.2015 (IInd Sitting) TF No. 2176783)

57. Choose the appropriate combination of signs to solve the equation.

(16 + 18) * (21–11) * 32 * 8

(1) – × =   (2) – = –

(3) + = –   (4) ÷ – =

(SSC CGL Tier-I Re-Exam, 30.08.2015)

58. A*B means multiply A by B; A@B means divide A by B, A? B means add B to A and A=B means subtract B from A. Then find the value of

10*10 = 5*10 ? 50@10

(1) 100   (2) 45

(3) 1000   (4) 55

(SSC CGL Tier-I (CBE) Exam. 28.08.2016) (IInd Sitting)

59. If 37 *14 = 17,

69 * 33 = 34,

91 * 125 = 72

then what should be 28 * 56 = ?

(1) 26   (2) 42

(3) 34   (4) 28

(SSC CGL Tier-I (CBE) Exam. 28.08.2016) (IInd Sitting)

60. If 5 * 3 = 19 and 8 * 5 = 49, then what should 6 * 4 be ?

(1) 24   (2) 28

(3) 18   (4) 16

(SSC CGL Tier-I (CBE) Exam. 29.08.2016) (IInd Sitting)

61. Complete the third equation on the basis of a certain system followed in the first two equations.

(1) 5 * 4 * 2 * 1 = 1425

(2) 7 * 8 * 1 * 6 = 6817

(3) 9 * 3 * 7 * 5 = ?

(1) 3795   (2) 5397

(3) 5973   (4) 5379

(SSC CGL Tier-I (CBE) Exam. 30.08.2016) (Ist Sitting)

62. If 4 * 2 = 3 and 8 * 4 = 3, then 21 * 7 = ?

(1) 4   (2) 3

(3) 8   (4) 16

(SSC CGL Tier-I (CBE) Exam. 07.09.2016) (Ist Sitting)

63. If 3 * 4 = 10, 5 * 8 = 18, 7 * 7 = ?

(1) 26   (2) 21

(3) 28   (4) 49

(SSC CGL Tier-I (CBE) Exam. 30.08.2016) (IInd Sitting)

64. Select the correct combination of mathematical signs to replace * signs and to balance the equation.

48 * 4 * 6 * 3 * 30

(1) –, +, =, ×   (2) ÷, =, ×, +

(3) ÷, +, ×, =   (4) –, =, ×, +

(SSC CGL Tier-I (CBE) Exam. 29.08.2016) (Ist Sitting)

65. If, 1 * 2 = 1, 2 * 3 = –1 and 3 * 4 = –5, then find the value of 7 * 9 = ?

(1) – 47   (2) – 29

(3) – 2   (4) – 9

(SSC CGL Tier-I (CBE) Exam. 03.09.2016) (IIIrd Sitting)

66. Some equations are solved on the basis of certain system. Find out the correct answer for the unsolved equation on that basis.

If 3*2*8*4 = 632,

2*4*4*4 = 816

then 3*3*5*1 = ?

(1) 95   (2) 45

(3) 315   (4) 184

(SSC CGL Tier-I (CBE) Exam. 06.09.2016) (IIIrd Sitting)

67. Some equations have been solved on the basis of a certain pattern. Find the correct answer for the unsolved equation on that basis :

7 * 4 * 3 = 437

8 * 6 * 4 = 648

4 * 3 * 6 = ?

(1) 346   (2) 364

(3) 643   (4) 463

(SSC CGL Tier-I (CBE) Exam. 09.09.2016) (IInd Sitting)

68. If 13 * 45 = 29, 24 * 58 = 41, 74 * 32 = 53, what should 97 * 47 be ?

(1) 73   (2) 72

(3) 63   (4) 64

(SSC CGL Tier-I (CBE) Exam. 04.09.2016) (IInd Sitting)

69. Some equations have been solved on the basis of a certain pattern. Find the correct answer for the unsolved equation on that basis :

2 * 3 * 5 = 523

6 * 4 * 1 = 164

8 * 2 * 4 = 482,

then 6 * 8 * 2 = ?

(1) 826   (2) 268

(3) 286   (4) 628

(SSC CGL Tier-I (CBE) Exam. 10.09.2016) (IInd Sitting)

70. Some equations are solved on the basis of a certain system. Find out the correct answer four the unsolved equation on that basis.

9 * 8 = 63; 7 * 8 = 49,

5 * 6 = 25, 11 * 7 = ?

(1) 77   (2) 70

(3) 66   (4) 121

(SSC Multi-Tasking Staff Exam. 30.04.2017 Ist Sitting)

| SYMBOLS & NOTATIONS |

TYPE–III

1. After interchanging ÷ and +, 12 and 18, which one of the following equations becomes correct ?

(1) (90 × 18) + 18 = 60

(2) (18 + 6) ÷ 12 = 2

(3) (72 ÷18) × 18 = 72

(4) (12 + 6) × 18 = 36

(SSC Combined Graduate Level Tier-1 Exam. 16.05.2010 (Ist Sitting)

2. After interchanging ÷ and =, 2 and 3 which one of the following statements becomes correct ?

(1) 15 = 2 ÷ 3 (2) 5 ÷ 15 = 2

(3) 2 = 15 ÷ 3 (4) 3 = 2 ÷ 15

(SSC Combined Graduate Level Tier-1 Exam. 16.05.2010 (IInd Sitting)

3. Which of the following interchange of signs would make the given equation correct ?

(12 ÷ 6) + 3 × 7 = 42

(1) + and ×   (2) 6 and 7

(3) ÷ and +   (4) 12 and 3

SSC (10+2) Level Data Entry Operator & LDC Exam.04.12.2011 (Ist Sitting (North Zone)

4. Which interchange of signs will make the following equation correct ?

35 + 7 × 5 ÷ 5 – 6 = 24

(1) + and –   (2) + and ×

(3) ÷ and +   (4) – and ÷

SSC (10+2) Level Data Entry Operator & LDC Exam. 04.12.2011 (IInd Sitting (North Zone)

5. Which of the following interchanges of signs would make the given equation correct?

24 + 6 × 3 ÷ 3 – 1 = 14

(1) + and ×   (2) × and –

(3) ÷ and +   (4) – and ÷

SSC (10+2) Level Data Entry Operator & LDC Exam. 04.12.2011 (Ist Sitting (East Zone)

6. Which of the following interchange of signs or figures would make the given equation correct?

(5 + 2) × 2 – 10 = 16

(1) + and ×   (2) 5 and 10

(3) + and –   (4) 5 and 2

SSC (10+2) Level Data Entry Operator & LDC Exam. 04.12.2011 (IInd Sitting (East Zone)

7. Which interchange of signs will make the following equation correct?

30 – 6 ÷ 4 + 2 × 3 = 7

(1) + and ×   (2) – and +

(3) – and ÷   (4) + and –

SSC (10+2) Level Data Entry Operator & LDC Exam. 11.12.2011 (Ist Sitting (Delhi Zone)

8. Which of the following interchanges of signs would make the given equation correct ?

5 + 6 ÷ 3 – 12 × 2 = 17

(1) ÷ and ×   (2) + and ×

(3) + and ÷   (4) + and –

SSC (10+2) Level Data Entry Operator & LDC Exam. 11.12.2011 (IInd Sitting (Delhi Zone)

9. Which interchange of signs or numbers will make the following equation correct ?

(7 + 2) × 3 × 4 – 1 = 20

(1) 2 and 3   (2) × and –

(3) 7 and 3   (4) + and ×

SSC (10+2) Level Data Entry Operator & LDC Exam. 11.12.2011 (Ist Sitting (East Zone)

10. Which interchange of signs will make the following equation correct ?

(16 – 4) × 6 ÷ 2 + 8 = 30

(1) ÷ and –   (2) 4 and 2

(3) – and +   (4) 16 and 6

SSC (10+2) Level Data Entry Operator & LDC Exam. 11.12.2011 (IInd Sitting (East Zone)

11. Which one of the four interchanges in signs and numbers would make the given equation correct ?

6 × 4 + 2 = 16

(1) + and ×, and 4

(2) + and ×, 2 and 4

(3) + and ×, 4 and 6

(4) None of these

(SSC Assistant Grade-III Exam. 11.11.2012 (IInd Sitting)

12. Which of the following interchange of sign would make the given equation correct ?

(20 – 4) × 4 + 16 = 36

(1) + and –   (2) 5 and 5

(3) 16 and 6   (4) ÷ and +

(SSC Graduate Level Tier-I Exam. 21.04.2013, Ist Sitting)

13. Which of the following interchange of signs would make the given equation correct ?

2 × 3 + 6 – 12 ÷ 4 = 17

(1) × and +   (2) + and –

(3) + and ÷   (4) – and ÷

(SSC Graduate Level Tier-I Exam. 21.04.2013, IInd Sitting)

Directions (14 – 15) : In each of the following questions, which of the following interchange of signs would make the given equation correct?

(SSC Graduate Level Tier-I Exam. 21.04.2013, IInd Sitting)

14. 10 + 10 ÷ 10 – 10 × 10 = 10

(1) + and –   (2) + and ÷

(3) + and ×   (4) ÷ and +

15. (8 – 8) + 8 × 32 = 64

(1) ×, +, –   (2) –, ÷, +

(3) +, ÷, +   (4) +, ÷, ×

16. Which of the following interchanges of numbers would make the given equation correct ?

8 × 20 ÷ 3 + 9 – 5 = 38

(1) 3, 9   (2) 3, 8

(3) 8, 9   (4) 3, 5

(SSC Graduate Level Tier-I Exam. 19.05.2013, 2nd Sitting)

17. Which of the following interchange of signs or numbers would make the given equation correct ?

(18 ÷ 9) + 3 × 5 = 45

(1) × ÷   (2) + ÷

(3) 18 and 5   (4) 3 and 9

(SSC Cabinet Secretariat RO (ECO), DFO (T) & DFO (GD) Tier-I Exam. 23.06.2013)

18. Which of the following interchange of signs would make the equation correct ?

8 × 6 + 2 = 22

(1) +, ×, 2 and 6

(2) +, ×, 2 and 8

(3) +, ×, 6 and 8

(4) +, ×, 2 and 22

(SSC GL Tier-I Exam. 19.10.2014, Ist Sitting)

19. Which of the following interchange of signs would make the given equation correct ?

64 – 8 × 9 × 8 = 64

(1) + and –   (2) ÷ and ×

(3) + and ÷   (4) – and ×

(SSC GL Tier-I Exam. 19.10.2014)

┤ SYMBOLS & NOTATIONS ├

20. After interchanging ÷ and ×, 10 and 5, which one of the following becomes a correct equation ?
(1) (30 ÷ 5) × 10 = 24
(2) (30 × 10) ÷ 5 = 60
(3) (30 ÷ 10) × 5 = 18
(4) (10 ÷ 30) × 5 = 70
(SSC CHSL (10+2) DEO & LDC Exam. 02.11.2014, Patna Region : (Ist Sitting)

21. Which of the following inter-change of signs would make the given equation correct ?
(6 + 3) + (4 × 7) = 29
(1) + and –   (2) ÷ and +
(3) × and +   (4) ÷ and ×
(SSC CHSL (10+2) DEO & LDC Exam. 02.11.2014, IInd Sitting)

22. Change the sign to find the equation 28 – 7 + 2 × 2 = 0
(1) Change + into ×
(2) Change × into +
(3) Change – into +
(4) Change + into –
(SSC CHSL (10+2) DEO & LDC Exam. 02.11.2014, IInd Sitting)

23. What sign should be changed to make the equation 5 + 6, 3 – 12 × 2 = 17 correct ?
(1) +   (2) + ×
(3) – +   (4) None of these
(SSC CHSL (10+2) DEO & LDC Exam. 16.11.2014)

24. Which of the following inter-change of signs would make the equation correct ?
6 × 4 + 2 = 16
(1) + and ×, 2 & 4
(2) + and ×, 4 & 6
(3) + and ×, 2 & 6
(4) + and ×, 3 & 4
(SSC CGL Tier-I Exam. 19.10.2014 TF No. 022 MH 3)

25. Interchange of signs and num-bers would make the given equa-tion correct.
6 + 2 – 3 = 16
(1) + and –, 2 and 3
(2) × and +, 3 and 2
(3) ÷ and –, 3 and 2
(4) × and –, 2 and 3
(SSC CAPFs SI, CISF ASI & DP SI Exam, 21.06.2015, IInd Sitting)

26. After interchanging + and –, 8 and 7, which one of the following be-comes correct?
(1) 8 – 7 + 3 × 5 = 35
(2) 7 × 8 + 6 – 9 = 25

(3) 6 + 8 × 2 – 7 = 0
(4) 8 × 2 + 7 – 6 = 9
(SSC CGL Tier-I Exam, 16.08.2015 (IInd Sitting) TF No. 2176783)

27. Which of the following interchange of signs would make the equation correct?
5 + 3 × 8 – 12 ÷ 4 = 3
(1) – and ÷   (2) + and ×
(3) + and ÷   (4) + and –
(SSC CGL Tier-I (CBE) Exam. 29.08.2016) (Ist Sitting)

≋ ANSWERS ≋

TYPE-I (i)

1. (2)	**2.** (2)	**3.** (3)	**4.** (1)
5. (4)	**6.** (3)	**7.** (3)	**8.** (2)
9. (2)	**10.** (1)	**11.** (2)	**12.** (4)
13. (1)	**14.** (2)	**15.** (2)	**16.** (1)
17. (3)	**18.** (1)	**19.** (1)	**20.** (4)
21. (2)	**22.** (1)	**23.** (4)	**24.** (3)
25. (1)	**26.** (2)	**27.** (2)	**28.** (4)
29. (3)	**30.** (2)	**31.** (3)	**32.** (3)
33. (1)	**34.** (3)	**35.** (4)	**36.** (4)
37. (1)	**38.** (4)	**39.** (3)	**40.** (2)
41. (1)	**42.** (3)	**43.** (4)	**44.** (*)
45. (*)	**46.** (1)	**47.** (4)	**48.** (4)
49. (*)	**50.** (1)	**51.** (1)	**52.** (3)
53. (4)	**54.** (1)	**55.** (3)	**56.** (2)
57. (4)	**58.** (4)	**59.** (1)	**60.** (3)
61. (2)	**62.** (3)	**63.** (2)	**64.** (3)
65. (3)	**66.** (3)	**67.** (1)	**68.** (4)
69. (2)	**70.** (3)	**71.** (*)	**72.** (4)
73. (1)	**74.** (2)	**75.** (3)	**76.** (3)
77. (2)	**78.** (3)	**79.** (*)	**80.** (4)
81. (1)	**82.** (1)	**83.** (4)	**84.** (3)
85. (3)	**86.** (3)	**87.** (*)	**88.** (1)
89. (3)	**90.** (4)	**91.** (3)	**92.** (2)
93. (1)	**94.** (4)	**95.** (2)	**96.** (1)
97. (4)	**98.** (1)	**99.** (*)	**100.** (1)
101. (1)	**102.** (1)	**103.** (1)	**104.** (4)
105. (1)	**106.** (2)	**107.** (4)	**108.** (3)
109. (4)	**110.** (2)	**111.** (2)	**112.** (2)
113. (2)	**114.** (1)	**115.** (*)	**116.** (1)
117. (2)	**118.** (1)		

TYPE-I (ii)

1. (2)		

TYPE-I (iii)

1. (2)	**2.** (4)	**3.** (3)	**4.** (4)
5. (2)	**6.** (2)	**7.** (4)	**8.** (3)
9. (2)	**10.** (2)	**11.** (1)	**12.** (2)
13. (2)	**14.** (2)	**15.** (3)	**16.** (3)
17. (1)	**18.** (1)	**19.** (3)	**20.** (*)
21. (*)	**22.** (3)	**23.** (2)	**24.** (3)
25. (*)	**26.** (2)	**27.** (3)	**28.** (2)
29. (2)	**30.** (3)	**31.** (2)	**32.** (2)
33. (4)	**34.** (2)	**35.** (2)	**36.** (4)
37. (1)	**38.** (1)	**39.** (1)	

TYPE-I (iv)

1. (2)	**2.** (4)	**3.** (1)	**4.** (4)
5. (*)	**6.** (4)	**7.** (1)	**8.** (*)
9. (4)			

TYPE-I (v)

1. (1)	**2.** (2)	**3.** (1)	**4.** (3)
5. (1)	**6.** (3)	**7.** (3)	**8.** (2)
9. (4)	**10.** (4)	**11.** (1)	

TYPE-I (vi)

1. (4)	**2.** (4)	**3.** (3)	**4.** (*)
5. (3)	**6.** (1)	**7.** (2)	**8.** (4)
9. (4)	**10.** (2)	**11.** (1)	**12.** (3)

TYPE-I (vii)

1. (2)	**2.** (2)	**3.** (1)	**4.** (2)
5. (1)	**6.** (2)	**7.** (2)	**8.** (3)
9. (2)	**10.** (4)	**11.** (2)	**12.** (2)
13. (2)	**14.** (4)	**15.** (2)	**16.** (1)
17. (3)	**18.** (1)	**19.** (2)	**20.** (2)
21. (2)	**22.** (4)	**23.** (4)	**24.** (3)
25. (2)	**26.** (1)	**27.** (4)	**28.** (4)
29. (1)	**30.** (2)	**31.** (2)	**32.** (3)
33. (3)	**34.** (4)	**35.** (3)	**36.** (2)

| | SYMBOLS & NOTATIONS | |

37. (2)	38. (1)	39. (4)	40. (2)
41. (2)	42. (4)	43. (1)	44. (4)
45. (1)	46. (1)	47. (3)	48. (2)
49. (2)	50. (2)	51. (3)	52. (4)
53. (2)	54. (1)	55. (3)	56. (2)
57. (2)	58. (2)		

TYPE-II

1. (1)	2. (*)	3. (1)	4. (1)
5. (1)	6. (4)	7. (1)	8. (4)
9. (3)	10. (3)	11. (3)	12. (1)
13. (4)	14. (4)	15. (2)	16. (3)
17. (4)	18. (4)	19. (3)	20. (2)
21. (4)	22. (4)	23. (2)	24. (4)
25. (2)	26. (2)	27. (4)	28. (4)
29. (3)	30. (2)	31. (2)	32. (1)
33. (4)	34. (2)	35. (1)	36. (2)
37. (2)	38. (1)	39. (2)	40. (1)
41. (2)	42. (4)	43. (3)	44. (2)
45. (3)	46. (1)	47. (3)	48. (1)
49. (2)	50. (2)	51. (1)	52. (*)
53. (2)	54. (3)	55. (1)	56. (*)
57. (2)	58. (4)	59. (4)	60. (2)
61. (4)	62. (1)	63. (2)	64. (3)
65. (1)	66. (1)	67. (2)	68. (2)
69. (2)	70. (3)		

TYPE-III

1. (4)	2. (2)	3. (3)	4. (3)
5. (3)	6. (3)	7. (3)	8. (1)
9. (4)	10. (1)	11. (3)	12. (4)
13. (1)	14. (3)	15. (4)	16. (4)
17. (2)	18. (3)	19. (3)	20. (2)
21. (3)	22. (1)	23. (*)	24. (2)
25. (4)	26. (3)	27. (1)	

≋ EXPLANATIONS ≋

TYPE-I (i)

1. (2) $+ \rightarrow \div ;\ \div \rightarrow \times$; $\times \rightarrow - ;\ - \rightarrow +$

Option (1)
$18 \div 6 - 7 + 5 \times 2 = 20$
After conversion
$18 \times 6 + 7 \div 5 - 2 = 20$

or, $108 + \dfrac{7}{5} - 2 \neq 20$

Option (2)
$18 + 6 \div 7 \times 5 - 2 = 18$
After conversion
$18 \div 6 \times 7 - 5 + 2 = 18$
or, $3 \times 7 - 5 + 2 = 18$
or, $21 - 5 + 2 = 18$
or, $23 - 5 = 18$
or, $18 = 18$

2. (2) $- \rightarrow \div ;\ + \rightarrow \times$; $\div \rightarrow - ;\ \times \rightarrow +$

Option (1)
$18 \div 3 \times 2 + 8 - 6 = 10$
After conversion
$18 - 3 + 2 \times 8 \div 6 = 10$

or, $18 - 3 + 2 \times \dfrac{8}{6} = 10$

or, $18 - 3 + \dfrac{8}{3} \neq 10$

Option (2)
$18 - 3 + 2 \times 8 \div 6 = 14$
After conversion
$18 \div 3 \times 2 + 8 - 6 = 14$
or, $6 \times 2 + 8 - 6 = 14$
or, $12 + 8 - 6 = 14$

3. (3) $+ \Rightarrow \times ;\ \times \Rightarrow -$; $\div \Rightarrow + ;\ - \Rightarrow \div$

Given expression
$175 - 25 \div 5 + 20 \times 3 + 10 =?$
After conversion
$? = 175 \div 25 + 5 \times 20 - 3 \times 10$

or, $? = 7 + 100 - 30 = \boxed{77}$

4. (1) $- \Rightarrow \div ;\ + \Rightarrow \times$; $\div \Rightarrow - ;\ \times \Rightarrow +$

Option (1)
Given expression
$6 \div 20 \times 12 + 7 - 1 = 70$
After conversion
$6 - 20 + 12 \times 7 \div 1 = 70$
or, $6 - 20 + 84 = 70$
or, $90 - 20 = 70$
or, $70 = 70$

5. (4) $+ \Rightarrow - ;\ - \Rightarrow \times$; $\times \Rightarrow \div ;\ \div \Rightarrow +$

Given expression
$2 \div 6 \times 6 \div 2 = ?$
After changing the signs
$? = 2 + 6 \div 6 + 2$
or, $? = 2 + 1 + 2 = 5$

6. (3) $+ \Rightarrow \times ;\ \times \Rightarrow \div$; $- \Rightarrow + ;\ \div \Rightarrow -$

Given expression
$20 - 8 \times 4 \div 3 + 2 = ?$
After conversion
$? = 20 + 8 \div 4 - 3 \times 2$
or, $? = 20 + 2 - 6$
or, $? = 22 - 6 = 16$

7. (3) $\times \quad - \quad | \quad - \quad \div$; $+ \quad \times \quad | \quad \div \quad +$

Given expression
$16 \times 8 \div 4 - 3 + 9 = ?$
After conversion
$? = 16 - 8 + 4 \div 3 \times 9$

or, $? = 16 - 8 + \dfrac{4}{3} \times 9$

or, $? = 16 - 8 + 12 = \boxed{20}$

8. (2) $+ \Rightarrow - ;\ - \Rightarrow \times$; $\div \Rightarrow + ;\ \times \Rightarrow \div$

Given expression
$15 - 3 + 10 \times 5 \div 5 = ?$
After conversion
$? = 15 \times 3 - 10 \div 5 + 5$
or, $? = 45 - 2 + 5$
or, $? = 50 - 2 = \boxed{48}$

9. (2) $- \Rightarrow \div ;\ \div \Rightarrow \times$; $+ \Rightarrow - ;\ \times \Rightarrow +$

Option (1)
$20 + 8 - 7 \div 6 \times 4 = 20$
or, $20 - 8 \div 7 \times 6 + 4 = 20$

or, $20 - \dfrac{8}{7} \times 6 + 4 \neq 20$

┤ SYMBOLS & NOTATIONS ├

Option (2)
$20 - 5 ÷ 4 + 6 × 5 = 15$
or, $20 ÷ 5 × 4 - 6 + 5 = 15$
or, $4 × 4 - 6 + 5 = 15$
or, $16 - 6 + 5 = 15$

10. (1)

$× ⇒ +$	$÷ ⇒ -$

$? = 39 × 23 ÷ 21 × 5$
or, $? = 39 + 23 - 21 + 5$
or, $? = 67 - 21 = 46$

11. (2)

$+ ⇒ ÷$	$÷ ⇒ ×$
$× ⇒ -$	$- ⇒ +$

Option (1)
$18 ÷ 6 - 7 + 5 × 2 = 20$
or, $18 × 6 + 7 ÷ 5 - 2 = 20$

or, $108 + \dfrac{7}{5} - 2 = 20$

or, $\dfrac{540 + 7 - 10}{5} = 20$

or, $547 - 10 ≠ 20 × 5$
Option (2)
$18 + 6 ÷ 7 × 5 - 2 = 18$
or, $18 ÷ 6 × 7 - 5 + 2 = 18$
or, $3 × 7 - 5 + 2 = 18$
or, $21 - 5 + 2 = 18$

12. (4)

$+ ⇒ ÷$	$× ⇒ +$
$- ⇒ ×$	$÷ ⇒ -$

$36 - 6 + 3 × 5 ÷ 3 = 74$
or, $36 × 6 ÷ 3 + 5 - 3 = 74$
or, $36 × 2 + 5 - 3 = 74$
or, $72 + 5 - 3 = 74$

13. (1)

$+ ⇒ -$	$- ⇒ ×$
$÷ ⇒ +$	$× ⇒ ÷$

$10 × 5 ÷ 3 - 2 + 3 = ?$
or, $? = 10 ÷ 5 + 3 × 2 - 3$
or, $? = 2 + 6 - 3 = \boxed{5}$

14. (2)

$+ ⇒ ÷$	$- ⇒ ×$
$÷ ⇒ +$	$× ⇒ -$

$63 × 24 + 8 ÷ 4 + 2 - 3 = ?$
or, $? = 63 - 24 ÷ 8 + 4 ÷ 2 × 3$
or, $? = 63 - 3 + 2 × 3$
or, $? = 63 - 3 + 6$
or, $? = 66$

15. (2) $(16 - 4) × 6 ÷ 2 + 8 = 30$
$⇒ (16 ÷ 4) × 6 - 2 + 8 = 30$
$⇒ 4 × 6 - 2 + 8 = 30$
$⇒ 24 - 2 + 8 = 30$

16. (2)

$- ⇒ ÷$	$+ ⇒ -$
$÷ ⇒ ×$	$× ⇒ +$

Option (1)
$70 - 2 + 4 ÷ 5 × 6 = 44$
$⇒ 70 ÷ 2 - 4 × 5 + 6 = 44$
$⇒ 35 - 20 + 6 = 44$
Option (2)
$70 - 2 + 4 ÷ 5 × 6 = 21$
$70 ÷ 2 - 4 × 5 + 6 = 21$
$⇒ 35 - 20 + 6 = 21$
$⇒ 41 - 20 = 21$

17. (3)

$- ⇒ ÷$	$+ ⇒ ×$
$÷ ⇒ -$	$× ⇒ +$

Option (1)
$19 + 5 - 4 × 2 ÷ 4 = 11$
$⇒ 19 × 5 ÷ 4 + 2 - 4 = 11$
$⇒ \dfrac{95}{4} + 2 - 4 ≠ 11$
Option (2)
$19 × 5 - 4 ÷ 2 + 4 = 16$
$⇒ 19 + 5 ÷ 4 - 2 × 4 = 16$
$⇒ 19 + \dfrac{5}{4} - 8 ≠ 16$
Option (3)
$19 ÷ 5 + 4 - 2 × 4 = 13$
$⇒ 19 - 5 × 4 ÷ 2 + 4 = 13$
$⇒ 19 - 5 × 2 + 4 = 13$
$⇒ 19 - 10 + 4 = 13$

18. (1)

$- ⇒ ÷$	$+ ⇒ ×$
$÷ ⇒ -$	$× ⇒ +$

Option (1)
$30 - 6 + 5 × 4 ÷ 2 = 27$
$⇒ 30 ÷ 6 × 5 + 4 - 2 = 27$
$⇒ 5 × 5 + 4 - 2 = 27$
$⇒ 25 + 4 - 2 = 27$
Option (2)
$30 + 6 - 5 ÷ 4 × 2 = 30$
$⇒ 30 × 6 ÷ 5 - 4 + 2 = 30$
$⇒ 36 - 4 + 2 ≠ 30$
Option (3)
$30 × 6 ÷ 5 - 4 + 2 = 32$
$⇒ 30 + 6 - 5 ÷ 4 × 2 ≠ 32$

19. (1)

$× ⇒ +$	$- ⇒ ÷$
$+ ⇒ ×$	$÷ ⇒ -$

Option (1)
$16 + 5 - 10 × 4 ÷ 3 = 9$
$⇒ 16 × 5 ÷ 10 + 4 - 3 = 9$
$⇒ 8 + 4 - 3 = 9$

20. (4)

$- ⇒ ÷$	$+ ⇒ ×$
$÷ ⇒ -$	$× ⇒ +$

Option (1)
$24 ÷ 8 - 4 + 2 × 3 = 16$

After conversion
$24 - 8 ÷ 4 × 2 + 3 = 16$
or, $24 - 2 × 2 + 3 = 16$
or, $24 - 4 + 3 = 16$
or, $27 - 4 = 16$
or, $23 ≠ 16$
Option (2)
$24 - 8 + 4 × 2 ÷ 3 = 12$
After conversion
$24 ÷ 8 × 4 + 2 - 3 = 12$
or, $3 × 4 + 2 - 3 = 12$
or, $12 + 2 - 3 = 12$
or, $11 ≠ 12$
Option (3)
$24 × 8 - 4 ÷ 2 + 3 = 17$
After conversion
$24 + 8 ÷ 4 - 2 × 3 = 17$
or, $24 + 2 - 6 = 17$
or, $26 - 6 = 17$
or, $20 ≠ 17$
Option (4)
$24 + 8 - 4 × 2 ÷ 3 = 47$
After conversion
or, $24 × 8 ÷ 4 + 2 - 3 = 47$
or, $24 × 2 + 2 - 3 = 47$
or, $48 + 2 - 3 = 47$
or, $50 - 3 = 47$
or, $47 = 47$

21. (2)

$÷ → +$	$× → -$

Given expression
$(15 × 9) ÷ (12 × 4) × (4 ÷ 4) = ?$
After changing the sign,
$? = (15 - 9) + (12 - 4) - (4 + 4)$
or, $? = (6) + (8) - (8)$
or, $? = 6 + 8 - 8 = 6$

22. (1)

$+$	$⇒$	$-$	$-$	$⇒$	$×$
$÷$	$⇒$	$+$	$×$	$⇒$	$÷$

Given expression
$15 × 3 ÷ 4 - 6 + 7 = ?$
After conversion
$? = 15 ÷ 3 + 4 × 6 - 7$
or, $? = 5 + 24 - 7$
or, $? = 29 - 7 = \boxed{22}$

23. (4)

$× ⇒ -$	$÷ ⇒ +$
$+ ⇒ ×$	

Given expression
$(16 × 5) ÷ 5 + 3 = ?$
After conversion
$? = (16 - 5) + 5 × 3$
or, $? = 11 + 5 × 3$
or, $? = 11 + 15 = 26$

24. (3)

$÷ → +$	$- → ×$
$× → -$	$+ → ÷$

┤ **SYMBOLS & NOTATIONS** ├

Option (1)
$10 \times 4 = 06 \Rightarrow 10 - 4 = 06$
Option (2)
$10 - 4 = 40 \Rightarrow 10 \times 4 = 40$
Option (3)
$10 + 5 = 50 \Rightarrow 10 \div 5 = 2$
and $2 \neq 50$
Option (4)
$10 \div 5 = 15 \Rightarrow 10 + 5 = 15$

25. (1)

$\times \to +$	$\div \to -$
$- \to \times$	$+ \to \div$

Given expression
$54 \div 16 - 3 \times 6 + 2 = ?$
After conversion
$? = 54 - 16 \times 3 + 6 \div 2$
or, $? = 54 - 48 + 3 = \boxed{9}$

26. (2)

$+ \Rightarrow -$	$\div \Rightarrow +$
$- \Rightarrow \times$	$\times \Rightarrow \div$

Option (1)
$56 + 12 \times 34 - 12 = 102$
After changing the signs
$56 - 12 \div 34 \times 12 = 102$

or, $56 - \dfrac{12}{34} \times 12 = 102$

or, $56 - \dfrac{144}{34} \times 12 \neq 102$

Option (2)
$8 \div 44 - 5 + 25 = 203$
After changing the signs
$8 + 44 \times 5 - 25 = 203$
or, $8 + 220 - 25 = 203$
or, $228 - 25 = 203$
or, $203 = 203$
Option (3)
$112 \times 44 - 12 + 10 = 46$
After changing the signs
$112 \div 44 \times 12 - 10 = 46$

or, $\dfrac{112}{44} \times 12 - 10 = 46$

or, $\dfrac{28}{11} \times 12 - 10 = 46$

or, $\dfrac{336}{11} - 10 = 46$

or, $\dfrac{336 - 110}{11} = 46$

or, $226 = 46 \times 11$
or, $226 \neq 506$
Option (4)
$9 \div 64 - 2 \times 6 = 54$

After changing the signs
$9 + 64 \times 2 \div 6 = 54$

or, $9 + 64 \times \dfrac{2}{6} = 54$

or, $9 + \dfrac{64}{3} = 54$

or, $27 + 64 = 54 \times 3$
or, $91 \neq 162$

27. (2)

$- \Rightarrow \div$	$+ \Rightarrow \times$
$\div \Rightarrow -$	$\times \Rightarrow +$

Option (1)
$30 + 5 - 12 \div 8 \times 12 = 70$
After changing the signs
$30 \times 5 \div 12 \div 8 + 12 = 70$

or, $30 \times \dfrac{5}{12} - 8 + 12 = 70$

or, $\dfrac{25}{2} - 8 + 12 = 70$

or, $25 - 16 + 24 = 70 \times 2$
or, $33 \neq 140$
Option (2)
$30 - 5 + 12 \div 8 \times 12 = 76$
After changing the signs
$30 \div 5 + 12 \div 8 + 12 = 76$
or, $6 \times 12 - 8 + 12 = 76$
or, $72 - 8 + 12 = 76$
or, $84 - 8 = 76$
or, $76 = 76$
Option (3)
$30 \times 5 - 12 + 8 \div 12 = 60$
After changing the signs
$30 + 5 \div 12 \times 8 - 12 = 60$

or, $30 + \dfrac{5}{12} \times 8 - 12 = 60$

or, $30 + \dfrac{5}{3} \times 2 - 12 = 60$

or, $30 + \dfrac{10}{3} - 12 = 60$

or, $90 + 10 - 36 = 60 \times 3$
or, $64 \neq 180$
Option (4)
$30 \div 5 \times 12 + 8 - 12 = 24$
After changing the signs
$30 - 5 + 12 \times 8 \div 12 = 24$

or, $30 - 5 + 12 \times \dfrac{8}{12} = 24$

or, $30 - 5 + 8 = 24$
or, $33 \neq 24$

28. (4)

$+ \Rightarrow \times$	$\times \Rightarrow \div$
$- \Rightarrow +$	$\div \Rightarrow -$

Given expression
$20 - 5 \div 18 \times (3 + 2) = ?$
After changing the signs
$? = 20 + 5 - 18 \div (3 \times 2)$
or, $? = 20 + 5 - 18 \div 6$
or, $? = 20 + 5 - 3$
or, $? = 25 - 3 = 22$

29. (3)

$\times \Rightarrow -$	$+ \Rightarrow \times$
$- \Rightarrow +$	■

Given expression
$6 + (3 \times 1) + 5 = ?$
After changing the signs
$? = 6 \times (3 - 1) \times 5$
or, $? = 6 \times 2 \times 5 = 60$

30. (2)

$+ \Rightarrow \div$	$\div \Rightarrow -$
$- \Rightarrow \times$	$\times \Rightarrow +$

Give expression
$12 + 6 \div 3 - 2 \times 8 = ?$
After changing the signs
$? = 12 \div 6 - 3 \times 2 + 8$
or, $? = 2 - 6 + 8$
or, $? = 10 - 6 = \boxed{4}$

31. (3)

$+ \Rightarrow \times$	$- \Rightarrow \div$
$\times \Rightarrow -$	$\div \Rightarrow +$

Give expression
$26 + 74 - 4 \times 5 \div 2 = ?$
After changing the signs
$? = 26 \times 74 \div 4 - 5 + 2$
$? = 481 - 5 + 2$
or, $? = 483 - 5 = \boxed{478}$

32. (3)

$+ \Rightarrow -$	$\div \Rightarrow +$
$- \Rightarrow \times$	$\times \Rightarrow \div$

Option (1)
$46 - 10 + 10 \times 5 = 92$
or, $46 \times 10 - 10 \div 5 = 92$
or, $460 - 2 \neq 92$
Option (2)
$265 + 11 - 2 \times 14 = 22$
or, $265 - 11 \times 2 \div 14 = 22$

or, $265 - \dfrac{22}{14} \neq 22$

Option (3)
$66 \times 3 - 11 + 12 = 230$
or, $66 \div 3 \times 11 - 12 = 230$
or, $22 \times 11 - 12 = 230$
or, $242 - 12 = 230$

33. (1)

$+ \Rightarrow -$	$- \Rightarrow =$	$= \Rightarrow +$
$\div \Rightarrow >$	$\times \Rightarrow <$	

$8 + 4 - ?$
$\Rightarrow 8 - 4 = ?$
$\therefore ? = 4$

⊣ SYMBOLS & NOTATIONS ⊢

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34. (3)

− ⇒ +	+ ⇒ −
× ⇒ ÷	÷ ⇒ ×

? = 7 − 10 × 5 ÷ 6 + 4
⇒ ? = 7 + 10 ÷ 5 × 6 − 4
⇒ ? = 7 + 2 × 6 − 4
⇒ ? = 7 + 12 − 4 = 15

35. (3)

÷ ⇒ ×	− ⇒ +
× ⇒ −	+ ⇒ ÷

? = 20 + 4 × 6 − 5 ÷ 7
⇒ ? = 20 ÷ 4 − 6 + 5 × 7
⇒ ? = 5 − 6 + 35 = 34

36. (4)

+ ⇒ ×	− ⇒ +
× ⇒ ÷	÷ ⇒ −

10 + 5 × 10 ÷ 2 − 5
⇒ ? = 10 × 5 ÷ 10 − 2 + 5
⇒ ? = 5 − 2 + 5 = 8

37. (4) **Option (1)**
10 ÷ 5 + 4 = 6
⇒ 10 × 5 ÷ 4 = 6

⇒ $\dfrac{10 \times 5}{4} \neq 6$

Option (2)
10 − 4 + 2 = 6
⇒ 10 − 4 ÷ 2 = 6
⇒ 10 − 2 ≠ 6
Option (3)
10 + 2 − 5 = 6
⇒ 10 ÷ 2 − 5 ≠ 6
Option (4)
10 + 2 × 1 = 6
⇒ 10 ÷ 2 + 1 = 6
⇒ 5 + 1 = 6

38. (4) **Option (1)**
36 × 6 + 7 ÷ 2 − 6 = 20
⇒ 36 + 6 ÷ 7 − 2 × 6 = 20

⇒ $36 + \dfrac{6}{7} - 12 \neq 20$

Option (2)
36 ÷ 6 + 3 × 5 − 3 = 45
⇒ 36 − 6 ÷ 3 + 5 × 3 = 45
⇒ 36 − 2 + 15 ≠ 45
Option (3)
36 + 6 − 3 × 5 ÷ 3 = 24
⇒ 36 ÷ 6 × 3 + 5 − 3 = 25
⇒ 6 × 3 + 5 − 3 = 24
⇒ 18 + 5 − 3 ≠ 24
Option (4)
36 − 6 + 3 × 5 ÷ 3 = 74
⇒ 36 × 6 ÷ 3 + 5 − 3 = 74
⇒ 72 + 5 − 3 = 74

39. (3) **Option (1)**
18 + 14 − 24 × 12 ÷ 16 = 12
⇒ 18 × 14 ÷ 24 + 12 − 16 = 12

⇒ $\dfrac{18 \times 14}{24} + 12 - 16 = 12$

⇒ $\dfrac{21}{2} + 12 - 16 \neq 12$

Option (2)
16 × 14 − 24 ÷ 18 + 12 = − 24
⇒ 16 + 14 ÷ 24 − 18 × 12 = − 24

⇒ $16 + \dfrac{14}{24} - 18 \times 12 \neq -24$

Option (3)
24 − 12 + 12 ÷ 16 × 18 = 26
⇒ 24 ÷ 12 × 12 − 16 + 18 = 26
⇒ 24 − 16 × 18 = 26

40. (2)

× ⇒ −	− ⇒ ×
+ ⇒ ÷	÷ ⇒ +

? = (15 − 10) ÷ (130 + 10) × 50
⇒ ? = (15 × 10) + (130 ÷ 10) − 50
⇒ ? = (150) + (13) − 50
⇒ ? = 163 − 50 = $\boxed{113}$

41. (1)

+ ⇒ ÷	− ⇒ ×
÷ ⇒ +	× ⇒ −

36 × 12 + 4 ÷ 6 + 2 − 3 = ?
⇒ ? = 36 − 12 ÷ 4 + 6 ÷ 2 × 3
⇒ ? = 36 − 3 + 9
⇒ ? = 45 − 3 = $\boxed{42}$

42. (3)

T ⇒ ×	U ⇒ −
V ⇒ ÷	W ⇒ +

(50 V 2) W (28 T 4)
⇒ (50 ÷ 2) + (28 × 4)
⇒ 25 + 112 = 137

43. (4)

− ⇒ ÷	+ ⇒ ×
÷ ⇒ −	× ⇒ +

Option (1)
49 × 7 + 3 ÷ 5 − 8 = 16
⇒ 49 + 7 × 3 − 5 ÷ 8 = 16

⇒ $49 + 21 - \dfrac{5}{8} = 16$

⇒ 392 + 168 − 5 ≠ 128
Option (2)
49 ÷ 7 × 3 + 5 − 8 = 26

⇒ 49 − 7 + 3 × 5 ÷ 8 = 26

⇒ $49 - 7 + \dfrac{15}{8} = 26$

⇒ 392 − 56 + 15 = 208
⇒ 351 ≠ 208
Option (3)
49 + 7 − 3 × 5 ÷ 8 = 20
⇒ 49 × 7 ÷ 3 + 5 − 8 = 20

⇒ $\dfrac{49 \times 7}{3} + 5 - 8 \neq 20$

Option (4)
49 − 7 + 3 ÷ 5 × 8 = 24
⇒ 49 ÷ 7 × 3 − 5 + 8 = 24
⇒ 7 × 3 − 5 + 8 = 24
⇒ 21 − 5 + 8 = 24

44. (*)

+ ⇒ ×	− ⇒ ÷
× ⇒ +	÷ ⇒ −

25 × 5 − 3 ÷ 2 + 5 = ?
⇒ ? = 25 + 5 ÷ 3 − 2 × 5

⇒ $? = 25 + \dfrac{5}{3} - 10$

⇒ $? = \dfrac{75 + 5 - 30}{3} = \dfrac{80 - 30}{3}$

$= \dfrac{50}{3} = 16\dfrac{2}{3}$

45. (*)

− ⇒ +	+ ⇒ ×
÷ ⇒ −	× ⇒ ÷

Option (1)
5 − 2 + 12 × 6 ÷ 2 = 27
⇒ 5 + 2 × 12 ÷ 6 − 2 = 27
⇒ 5 + 2 × 2 − 2 = 27
⇒ 5 + 4 − 2 ≠ 27
Option (2)
5 + 2 − 12 ÷ 6 × 2 = 13
⇒ 5 × 2 + 12 − 6 ÷ 2 = 13
⇒ 10 + 12 − 3 = 13
⇒ 19 ≠ 13
Option (3)
5 + 2 − 12 × 6 ÷ 2 = 10
⇒ 5 × 2 + 12 ÷ 6 − 2 = 10
⇒ 10 + 2 − 2 = 10
Option (4)
5 ÷ 2 + 12 × 6 − 2 = 3
⇒ 5 − 2 × 12 ÷ 6 + 2 = 3
⇒ 5 − 2 × 2 + 2 = 3
⇒ 5 − 4 + 2 = 3
Options (1) and (2) are wrong.

---| **SYMBOLS & NOTATIONS** |---

46. (1)

× ⇒ −	+ ⇒ ×
÷ ⇒ +	− ⇒ ÷

175 − 25 ÷ 5 + 20 × 3 + 10 = ?
⇒ ?
= 175 ÷ 25 + 5 × 20 − 3 × 10
⇒ ? = 7 + 100 − 30 = 77

47. (2)

+ ⇒ ÷	÷ ⇒ −
− ⇒ ×	× ⇒ +

8 + 2 ÷ 3 − 4 × 6 = ?
⇒ ? = 8 ÷ 2 − 3 × 4 + 6
⇒ ? = 4 − 12 + 6 = − 2

48. (4)

÷ ⇒ −	− ⇒ ×
× ⇒ +	+ ⇒ ÷

20 × 60 ÷ 40 − 20 + 10 = ?
⇒ ? = 20 + 60 − 40 × 20 ÷ 10
⇒ ? = 20 + 60 − 40 × 2
⇒ ? = 80 − 80 = 0

49. (*)

+ ⇒ ÷	× ⇒ +
− ⇒ ×	÷ ⇒ −

Option (1)
36 × 6 + 3 − 2 < 20
⇒ 36 + 6 ÷ 3 × 2 < 20
⇒ 36 + 2 × 2 ≮ 20
Option (2)
36 × 6 + 3 × 2 > 20
⇒ 36 + 6 ÷ 3 + 2 > 20
⇒ 36 + 2 + 2 > 20
Option (3)
36 + 6 × 3 + 2 = 20
⇒ 36 ÷ 6 + 3 ÷ 2 = 20
$$\Rightarrow 6 + \frac{3}{2} \neq 20$$
Option (4)
36 + 6 − 3 × 2 = 20
⇒ 36 ÷ 6 × 3 + 2 = 20
⇒ 6 × 3 + 2 = 20
⇒ 18 + 2 = 20
Both the Options (2) and (4) are correct.

50. (1)

− ⇒ +	÷ ⇒ ×
× ⇒ −	+ ⇒ ÷

Option (1)
25 − 15 + 5 ÷ 4 × 16 = 21
⇒ 25 + 15 ÷ 5 × 4 − 16 = 21
⇒ 25 + 3 × 4 − 16 = 21
⇒ 25 + 12 − 16 = 21
⇒ 37 − 16 = 21
Option (2)
25 + 11 + 4 ÷ 10 × 6 = 20

⇒ 25 ÷ 11 + 4 × 10 − 6 = 20
$$\Rightarrow \frac{25}{11} + 40 - 6 \neq 20$$

Option (3)
25 × 12 − 14 ÷ 4 + 6 = 16
⇒ 25 − 12 + 14 × 4 ÷ 6 = 16
$$\Rightarrow 25 - 12 + 14 \times \frac{2}{3} = 16$$
$$\Rightarrow 25 - 12 + \frac{28}{3} \neq 16$$

Option (4)
25 − 12 + 14 ÷ 2 × 4 = 15
⇒ 25 + 12 ÷ 14 × 2 − 4 = 15
$$\Rightarrow 25 + \frac{6}{7} \times 2 - 4 \neq 15$$

51. (1) 5 + 3 × 8 − 12 ÷ 4 = 3
⇒ 5 + 3 × 8 ÷ 12 − 4 = 3
⇒ 5 + 2 − 4 = 3

52. (3) 33 × 11 ÷ 3 − 6 = 115
$$\Rightarrow \left(\frac{363}{3}\right) - 6 = 115$$
⇒ 121 − 6 = 115

53. (4)

× ⇒ +	÷ ⇒ −
+ ⇒ ÷	− ⇒ ×

14 × 4 ÷ 70 + 10 − 2 = ?
⇒ ? = 14 + 4 − 70 ÷ 10 × 2
⇒ ? = 14 + 4 − 7 × 2
⇒ ? = 18 − 14 = $\boxed{4}$

54. (1)

+ ⇒ ÷	− ⇒ ×
× ⇒ +	÷ ⇒ −

Option (1)
5 × 8 − 5 + 5 ÷ 1 = 12
⇒ 5 + 8 × 5 ÷ 5 − 1 = 12
⇒ 5 + 8 × 1 − 1 = 12
⇒ 5 + 8 − 1 = 12
Option (2)
55 − 2 + 10 ÷ 1 × 5 = 16
⇒ 55 × 2 ÷ 10 − 1 + 5 = 16
$$\Rightarrow \frac{55 \times 2}{10} - 1 + 5 = 16$$
⇒ 11 − 1 + 5 ≠ 16
Option (3)
38 ÷ 10 − 5 + 7 × 8 = 25
⇒ 38 − 10 × 5 ÷ 7 + 8 = 25
$$\Rightarrow 38 - \frac{10 \times 5}{7} + 8 = 25$$

$$\Rightarrow 38 - \frac{50}{7} + 8 \neq 25$$

Option (4)
10 − 12 + 2 ÷ 30 × 1 = 10
⇒ 10 × 12 ÷ 2 − 30 + 1 = 10
⇒ 10 × 6 − 30 + 1 = 10
⇒ 60 − 30 + 1 ≠ 10

55. (3)

− ⇒ +	+ ⇒ ×
× ⇒ −	

Option (1)
22 + 7 − 3 × 9 = 148
⇒ 22 × 7 + 3 − 9 = 148
⇒ 154 + 3 − 9 = 148
Option (2)
33 × 5 − 10 + 20 = 228
⇒ 33 − 5 + 10 × 20 = 228
⇒ 33 − 5 + 200 = 228
⇒ 233 − 5 = 228
Option (3)
7 × 28 − 3 × 52 = 127
⇒ 7 × 28 + 3 − 52 = 127
⇒ 196 + 3 − 52 = 127
⇒ 199 − 52 ≠ 127
Option (4)
44 − 9 + 6 × 11 = 87
⇒ 44 + 9 × 6 − 11 = 87
⇒ 44 + 54 − 11 = 87
⇒ 98 − 11 = 87

56. (2)

+ ⇒ ÷	× ⇒ +
− ⇒ ×	÷ ⇒ −

Option (1)
5 − 3 + 2 × 4 ÷ 8 = 2
⇒ 5 × 3 ÷ 2 + 4 − 8 = 2
$$\Rightarrow 5 \times \frac{3}{2} + 4 - 8 = 2$$
$$\Rightarrow \frac{15}{2} + 4 - 8 = 2$$
$$\Rightarrow \frac{15 + 8 - 16}{2} \neq 2$$
Option (2)
5 × 3 + 2 − 4 × 8 = 19
⇒ 5 + 3 ÷ 2 × 4 + 8 = 19
$$\Rightarrow 5 + \frac{3}{2} \times 4 + 8 = 19$$
⇒ 5 + 3 × 2 + 8 = 19
⇒ 5 + 6 + 8 = 19
Option (3)
5 ÷ 3 × 2 − 4 + 8 = 8
⇒ 5 − 3 + 2 × 4 ÷ 8 = 8

─┤ SYMBOLS & NOTATIONS ├─

$\Rightarrow 5 - 3 + 2 \times \dfrac{4}{8} = 8$

$\Rightarrow 5 - 3 + 1 \neq 8$

Option (4)

$5 + 3 \times 2 \div 4 - 8 = 4$

$\Rightarrow 5 \div 3 + 2 - 4 \times 8 = 4$

$\Rightarrow \dfrac{5}{3} + 2 - 32 \neq 4$

57. (4)

$+ \Rightarrow \div$	$- \Rightarrow +$
$\times \Rightarrow -$	$\div \Rightarrow \times$

$8 \div 4 - 6 + 3 \times 4 = ?$

$? = 8 \times 4 + 6 \div 3 - 4$

$\Rightarrow ? = 32 + 2 - 4 = \boxed{30}$

58. (4)

$+ \Rightarrow -$	$- \Rightarrow \times$
$\times \Rightarrow \div$	$\div \Rightarrow +$

$25 \times 5 \div 30 + 8 - 2 = ?$

$? = 25 \div 5 + 30 - 8 \times 2$

$\Rightarrow ? = 5 + 30 - 16 = 19$

59. (1)

$- \Rightarrow +$	$+ \Rightarrow -$
$\div \Rightarrow \times$	$\times \Rightarrow \div$

Option (1)

$50 \times 5 \div 2 - 30 + 25 = 25$

$\Rightarrow 50 \div 5 \times 2 + 30 - 25 = 25$

$\Rightarrow 10 \times 2 + 30 - 25 = 25$

$\Rightarrow 20 + 30 - 25 = 25$

Option (2)

$50 - 30 + 5 \div 2 \times 30 = 25$

$\Rightarrow 50 + 30 - 5 \times 2 \div 30 = 25$

$\Rightarrow 50 + 30 - \dfrac{1}{3} = 25$

$\Rightarrow 80 - \dfrac{1}{3} \neq 25$

Option (3)

$40 + 35 \times 2 - 50 \div 30 = 95$

$\Rightarrow 40 - 35 \div 2 + 50 \times 30 = 95$

$\Rightarrow 40 - \dfrac{35}{2} + 1500 \neq 95$

Option (4)

$30 \times 2 - 25 + 50 \div 5 = 100$

$\Rightarrow 30 \div 2 + 25 - 50 \times 5 = 100$

$\Rightarrow 15 + 25 - 250 \neq 100$

60. (3)

$+ \Rightarrow \div$	$\times \Rightarrow +$
$- \Rightarrow \times$	$\div \Rightarrow -$

(1) $15 \div 5 \times 2 - 6 + 3 = 28$

$\Rightarrow 15 - 5 + 2 \times 6 \div 3 = 28$

$\Rightarrow 15 - 5 + 2 \times 2 = 28$

$\Rightarrow 15 - 5 + 4 \neq 28$

(2) $15 \times 5 + 2 - 6 \div 3 = 56.5$

$\Rightarrow 15 + 5 \div 2 \times 6 - 3 = 56.5$

$\Rightarrow 15 + 2.5 \times 6 - 3 = 56.5$

$\Rightarrow 15 + 15 - 3 \neq 56.5$

(3) $15 + 5 - 2 \div 6 \times 3 = 3$

$\Rightarrow 15 \div 5 \times 2 - 6 + 3 = 3$

$\Rightarrow 3 \times 2 - 6 + 3 = 3$

$\Rightarrow 6 - 6 + 3 = 3$

(4) $15 - 5 + 2 \times 6 \div 3 = 41$

$\Rightarrow 15 \times 5 \div 2 + 6 - 3 = 41$

$\Rightarrow 15 \times 2.5 + 6 - 3 = 41$

$\Rightarrow 37.5 + 6 - 3 \neq 41$

61. (2)

$- \Rightarrow \div$	$+ \Rightarrow \times$
$\div \Rightarrow -$	$\times \Rightarrow +$

Option (1)

$36 \times 4 - 12 + 5 \div 3 = 420$

$\Rightarrow 36 + 4 \div 12 \times 5 - 3 = 420$

$\Rightarrow 36 + \dfrac{4}{12} \times 5 - 3 = 420$

$\Rightarrow 36 + \dfrac{5}{3} - 3 = 420$

$\Rightarrow \dfrac{108 + 5 - 9}{3} = 420$

$\Rightarrow \dfrac{104}{3} \neq 420$

Option (2)

$52 \div 4 + 5 \times 8 - 2 = 36$

$\Rightarrow 52 - 4 \times 5 + 8 \div 2 = 36$

$\Rightarrow 52 - 4 \times 5 + 4 = 36$

$\Rightarrow 52 - 20 + 4 = 36$

$\Rightarrow 56 - 20 = 36$

Option (3)

$36 - 12 \times 6 \div 3 + 4 = 60$

$\Rightarrow 36 \div 12 + 6 - 3 \times 4 = 60$

$\Rightarrow 3 + 6 - 12 \neq 60$

Option (4)

$43 \times 7 \div 5 + 4 - 8 = 25$

$\Rightarrow 43 + 7 - 5 \times 4 \div 8 = 25$

$\Rightarrow 43 + 7 - \dfrac{5}{2} = 25$

$\Rightarrow 50 - \dfrac{5}{2} \neq 25$

62. (3)

$a \Rightarrow \div$	$b \Rightarrow +$
$c \Rightarrow -$	$d \Rightarrow \times$

$24 \ a \ 6 \ d \ 4 \ b \ 9 \ c \ 8 = ?$

$\Rightarrow ? = 24 \div 6 \times 4 + 9 - 8$

$\Rightarrow ? = 4 \times 4 + 9 - 8$

$\Rightarrow ? = 16 + 9 - 8 = 17$

63. (2)

$\times \Rightarrow +$	$+ \Rightarrow \div$
$- \Rightarrow \times$	$\div \Rightarrow -$

$6 \times 4 - 5 + 2 \div 1 = ?$

$\Rightarrow ? = 6 + 4 \times 5 \div 2 - 1$

$\Rightarrow ? = 6 + 10 - 1 = 15$

64. (3)

$+ \Rightarrow \div$	$\times \Rightarrow +$
$- \Rightarrow \times$	$\div \Rightarrow -$

(a) $46 \times 6 \div 4 - 5 + 3 = 74$

$\Rightarrow 46 + 6 - 4 \times 5 \div 3 = 74$

$\Rightarrow 46 + 6 - 4 \times \dfrac{5}{3} = 74$

$\Rightarrow 46 + 6 - \dfrac{20}{3} = 74$

$\Rightarrow 52 - \dfrac{20}{3} = 74$

$\Rightarrow \dfrac{156 - 20}{3} = 74$

$\Rightarrow 136 \neq 74 \times 3$

(b) $46 - 6 + 4 \times 5 \div 3 = 71$

$\Rightarrow 46 \times 6 \div 4 + 5 - 3 = 71$

$\Rightarrow 46 \times \dfrac{6}{4} + 5 - 3 = 71$

$\Rightarrow 69 + 5 - 3 = 71$

(c) $46 \div 6 \times 4 - 5 + 3 = 75.5$

$\Rightarrow 46 - 6 + 4 \times 5 \div 3 = 75.5$

$\Rightarrow 46 - 6 + 4 \times \dfrac{5}{3} = 75.5$

$\Rightarrow 46 - 6 + \dfrac{20}{3} \neq 75.5$

(d) $46 \times 6 - 4 + 5 \div 3 = 70.1$

$\Rightarrow 46 + 6 \times 4 \div 5 - 3 = 70.1$

$\Rightarrow 46 + 6 \times \dfrac{4}{5} - 3 = 70.1$

$\Rightarrow 46 + \dfrac{24}{5} - 3 = 70.1$

$\Rightarrow \dfrac{230 + 24 - 15}{5} = 70.1$

$\Rightarrow \dfrac{239}{5} \neq 70.1$

65. (3)

$+ \Rightarrow \times$	$- \Rightarrow \div$
$\times \Rightarrow +$	$\div \Rightarrow -$

Option (1)

$18 - 6 \times 7 \div 2 + 8 = 63$

$\Rightarrow 18 \div 6 + 7 - 2 \times 8 = 63$

$\Rightarrow 3 + 7 - 16 \neq 63$

┤ SYMBOLS & NOTATIONS ├

Option (2)

$18 \div 6 + 4 - 2 \div 3 = 22$

$\Rightarrow 18 - 6 \times 4 \div 2 - 3 = 22$

$\Rightarrow 18 - 6 \times 2 - 3 = 22$

$\Rightarrow 18 - 12 - 3 \neq 22$

Option (3)

$18 + 6 - 4 \times 2 \div 3 = 26$

$\Rightarrow 18 \times 6 \div 4 + 2 - 3 = 26$

$\Rightarrow 27 + 2 - 3 = 26$

Option (4)

$18 \times 6 - 4 + 7 \times 8 = 47$

$\Rightarrow 18 + 6 \div 4 \times 7 + 8 = 47$

$\Rightarrow 18 + \dfrac{3}{2} \times 7 + 8 = 47$

$\Rightarrow 18 + \dfrac{21}{2} + 8 = 47$

$\Rightarrow \dfrac{36 + 21 + 16}{2} = 47$

$\Rightarrow 73 \neq 47 \times 2$

66. (3)

$+ \Rightarrow \times$	$- \Rightarrow \div$
$\times \Rightarrow -$	$\div \Rightarrow +$

$16 \div 64 - 8 \times 4 + 2 = ?$

$\Rightarrow ? = 16 + 64 \div 8 - 4 \times 2$

$\Rightarrow ? = 16 + 8 - 8 = 16$

67. (1)

$* \Rightarrow +$	$\# \Rightarrow -$
$@ \Rightarrow \times$	$\% \Rightarrow \div$

Option (1)

$256 \% 16 @ 5 \# 28 = 52$

$\Rightarrow 256 \div 16 \times 5 - 28 = 52$

$\Rightarrow 16 \times 5 - 28 = 52$

$\Rightarrow 80 - 28 = 52$

Option (2)

$256 \# 16 \% 5 \# 28 = 120$

$\Rightarrow 256 - 16 \div 5 - 28 = 120$

$\Rightarrow 256 - \dfrac{16}{5} - 28 \neq 120$

Option (3)

$256 @ 5 \% 16 * 28 = 408$

$\Rightarrow 256 \times 5 \div 16 + 28 = 408$

$\Rightarrow \dfrac{256 \times 5}{16} + 28 \neq 408$

Option (4)

$256 \# 16 @ 5 \% 28 = 80$

$\Rightarrow 256 - 16 + 5 \div 28 = 80$

$\Rightarrow 256 - 16 + \dfrac{5}{28} \neq 80$

68. (4)

$\div \Rightarrow \times$	$\times \Rightarrow -$
$- \Rightarrow +$	$+ \Rightarrow \div$

$48 + 6 - 12 \div 2 + 10 = ?$

$\Rightarrow ? = 48 \div 6 + 12 \times 2 \div 10$

$\Rightarrow ? = 8 + 12 \times \dfrac{2}{10}$

$\Rightarrow ? = 20 \times \dfrac{2}{10} = 4$

69. (2) $5 \times 3 + 8 - 4 \div 2 = 21$

$\Rightarrow 15 + 8 - 2 = 21$

70. (3)

$a \Rightarrow +$	$b \Rightarrow \times$
$c \Rightarrow \div$	$d \Rightarrow -$

$20\ a\ 10\ b\ 45\ c\ 5\ d\ 12 = ?$

$\Rightarrow ? = 20 + 10 \times 45 \div 5 - 12$

$\Rightarrow ? = 20 + 10 \times 9 - 12$

$\Rightarrow ? = 20 + 90 - 12 = 98$

71. (*)

$+ \Rightarrow \div$	$\times \Rightarrow +$
$- \Rightarrow \times$	$\div \Rightarrow -$

Option (1)

$25 \times 3 - 7 \div 8 + 12 = 18$

$\Rightarrow 25 + 3 \times 7 - 8 \div 12 = 18$

$\Rightarrow 25 + 3 \times 7 - \dfrac{8}{12} = 18$

$\Rightarrow 25 + 21 - \dfrac{2}{3} = 18$

$\Rightarrow 46 - \dfrac{2}{3} = 18$

$\Rightarrow \dfrac{138 - 2}{3} = 18$

$\Rightarrow 136 \neq 18 \times 3$

Option (2)

$25 + 3 \times 7 - 8 \div 12 = 10.89$

$\Rightarrow 25 \div 3 + 7 \times 8 - 12 = 10.89$

$\Rightarrow \dfrac{25}{3} + 56 - 12 = 10.89$

$\Rightarrow \dfrac{25 + 168 - 36}{3} = 10.89$

$\Rightarrow 157 \neq 10.89 \times 3$

Option (3)

$25 - 3 \div 7 \times 8 + 12 = 132$

$\Rightarrow 25 \times 3 - 7 + 8 \div 12 = 132$

$\Rightarrow 75 - 7 + \dfrac{8}{12} = 132$

$\Rightarrow 75 - 7 + \dfrac{2}{3} = 132$

$\Rightarrow \dfrac{225 - 21 + 2}{3} = 132$

$\Rightarrow 206 \neq 132 \times 3$

Option (4)

$25 \div 3 \times 7 - 8 + 12 = 19.3$

$\Rightarrow 25 - 3 + 7 \times 8 \div 12 = 19.3$

$\Rightarrow 25 - 3 + \dfrac{56}{12} = 19.3$

$\Rightarrow 25 - 3 + \dfrac{14}{3} = 19.3$

$\Rightarrow \dfrac{75 - 9 + 14}{3} = 19.3$

$\Rightarrow 80 \neq 19.3 \times 3$

72. (4) $4 \times 3 \times 4 = 48$

73. (1) **Option (1)**

$18 + 6 \div 5 = 9.6$

$\Rightarrow 18 \div 5 + 6 = 9.6$

$\Rightarrow 3.6 + 6 = 9.6$

Option (2)

$26 \div 5 + 6 = 6.4$

$\Rightarrow 26 + 6 \div 5 = 6.4$

$\Rightarrow 26 + 1.2 \neq 6.4$

Option (3)

$5 \div 6 + 80 = 5.8$

$\Rightarrow 6 + 5 \div 80 = 5.8$

$\Rightarrow 6 + 0.0625 \neq 5.8$

Option (4)

$90 + 5 \div 6 = 8.6$

$\Rightarrow 90 \div 6 + 5 = 8.6$

$\Rightarrow 15 + 5 \neq 8.6$

74. (2)

$- \Rightarrow +$	$+ \Rightarrow \times$
$\div \Rightarrow -$	$\times \Rightarrow \div$

Option (1)

$5 + 2 - 12 \div 6 \times 2 = 13$

$\Rightarrow 5 \times 2 + 12 - 6 \div 2 = 13$

$\Rightarrow 10 + 12 - 3 = 13$

$\Rightarrow 22 - 3 \neq 13$

Option (2)

$5 + 2 - 12 \times 6 \div 2 = 10$

$\Rightarrow 5 \times 2 + 12 \div 6 - 2 = 10$

$\Rightarrow 10 + 2 - 2 = 10$

Option (3)

$5 \div 2 + 12 \times 6 - 2 = 4$

$\Rightarrow 5 - 2 \times 12 \div 6 + 2 = 4$

$\Rightarrow 5 - 2 \times 2 + 2 = 4$

$\Rightarrow 5 - 4 + 2 = 4$

$\Rightarrow 7 - 4 \neq 4$

| SYMBOLS & NOTATIONS |

Option (4)
5 – 2 + 12 × 6 ÷ 2 = 27
⇒ 5 + 2 × 12 ÷ 6 – 2 = 27
⇒ 5 + 2 × 2 – 2 = 27
⇒ 5 + 4 – 2 ≠ 27

75. (3)

P ⇒ ÷	Q ⇒ ×
R ⇒ +	S ⇒ –

16 Q 12 P 6 R 5 S 4 = ?
⇒ ? = 16 × 12 ÷ 6 + 5 – 4
⇒ ? = 16 × 2 + 5 – 4
⇒ ? = 32 + 5 – 4
⇒ ? = 37 – 4 = 33

76. (3)

+ ⇒ ÷	÷ ⇒ +
× ⇒ –	– ⇒ ×

(30 + 20) – 5 (7 ÷ 3) × 25 = ?
⇒ ? = (30 – 20) × 5 (7 + 3) ÷ 25
⇒ ? = 10 × 5 × 10 ÷ 25 = 20

77. (2)

+ ⇒ ÷	÷ ⇒ –
– ⇒ ×	× ⇒ +

12 – 8 × 6 – 4 ÷ 6 + 3 = ?
⇒? = 12 × 8 + 6 × 4 – 6 ÷ 3
⇒? = 96 + 24 – 2
⇒? = 120 – 2 = 118

78. (3)

+ ⇒ ÷	÷ ⇒ ×
× ⇒ +	

64 + 8 × 32 ÷ 4 = ?
⇒ ? = 64 ÷ 8 + 32 × 4
⇒ ? = 8 + 128 = 136

79. (*)

– ⇒ +	+ ⇒ ×
÷ ⇒ –	× ⇒ ÷

27 × 3 ÷ 6 + 9 – 8 = ?
⇒ ? = 27 ÷ 3 – 6 × 9 + 8
⇒ ? = 9 – 54 + 8
⇒ ? = 17 – 54 = –37

80. (4) 4 × 6 ÷ 2 – 4 + 8 = 16
⇒ 4 × 3 – 4 + 8 = 16
⇒ 12 – 4 + 8 = 16

81. (1) *b af* ÷ *bf* × *d*
⇒ 105 ÷ 15 × 3
⇒ 7 × 3 = 21 ⇒ *cb*

82. (1) 5 + 3 × 8 – 12 ÷ 4 = 3
⇒ 5 + 3 × 8 ÷ 12 – 4 = 3

$$\Rightarrow 5 + \frac{3 \times 8}{12} - 4 = 3$$

$$\Rightarrow 5 + 2 - 4 = 3$$

83. (4)

+ ⇒ ÷	× ⇒ +
– ⇒ ×	÷ ⇒ –

Option (1)
33 × 4 – 5 + 6 ÷ 2 = 26
⇒ 33 + 4 × 5 ÷ 6 – 2 = 26

$$\Rightarrow 33 + \frac{10}{3} - 2 = 26$$

$$\Rightarrow \frac{99 + 10 - 6}{3} \neq 26$$

Option (2)
33 ÷ 4 × 5 + 6 – 2 = 30
⇒ 33 – 4 + 5 + 6 × 2 = 30

$$\Rightarrow 33 - 4 + \frac{5}{6} \times 2 = 30$$

$$\Rightarrow 33 - 4 + \frac{5}{3} = 30$$

$$\Rightarrow \frac{99 - 12 + 5}{3} \neq 30$$

Option (3)
33 – 4 + 5 ÷ 6 × 2 = 24
⇒ 33 × 4 ÷ 5 – 6 + 2 = 24

$$\Rightarrow \frac{132}{5} - 6 + 2 = 24$$

$$\Rightarrow \frac{132 - 30 + 10}{5} = 24$$

⇒ 112 ≠ 120

Option (4)
33 – 4 ÷ 5 × 6 + 2 = 130
⇒ 33 × 4 – 5 + 6 ÷ 2 = 130
⇒ 132 – 5 + 3 = 130
⇒ 135 – 5 = 130

84. (3)

× ⇒ +	– ⇒ ÷
÷ ⇒ –	+ ⇒ ×

Option (1)
16 × 5 ÷ 10 + 4 – 3 = 19
⇒ 16 + 5 – 10 × 4 ÷ 3 = 19

$$\Rightarrow 16 + 5 - \frac{10 \times 4}{3} = 19$$

$$\Rightarrow 21 - \frac{40}{3} = 19$$

$$\Rightarrow \frac{63 - 40}{3} = 19$$

$$\Rightarrow \frac{23}{3} \neq 19$$

Option (2)
16 + 5 ÷ 10 × 4 – 3 = 9
⇒ 16 × 5 – 10 + 4 ÷ 3 = 9

$$\Rightarrow 80 - 10 + \frac{4}{3} = 9$$

$$\Rightarrow \frac{240 - 30 + 4}{3} = 9$$

$$\Rightarrow \frac{214}{3} \neq 9$$

Option (3)
16 + 5 – 10 × 4 ÷ 3 = 9
⇒ 16 × 5 ÷ 10 + 4 – 3 = 9
⇒ 8 + 4 – 3 = 9

Option (4)
16 – 5 × 10 ÷ 4 + 3 = 12
⇒ 16 ÷ 5 + 10 – 4 × 3 = 12

$$\Rightarrow \frac{16}{5} + 10 - 12 = 12$$

$$\Rightarrow \frac{16 + 50 - 60}{5} = 12$$

$$\Rightarrow \frac{66 - 60}{5} \neq 12$$

85. (3)

+ ⇒ ×	– ⇒ +
× ⇒ ÷	÷ ⇒ –

9 – 4 + 2 ÷ 16 × 2 = ?
⇒ ? = 9 + 4 × 2 – 16 ÷ 2
⇒ ? = 9 + 4 × 2 – 8

$$\Rightarrow ? = 9 + 8 - 8 = \boxed{9}$$

86. (3) 92 × 4 ÷ 2 = 184
⇒ 92 × 2 = 184

87. (*)

+ ⇒ ÷	÷ ⇒ ×
× ⇒ –	– ⇒ +

Option (1)
30 × 40 + 8 – 70 ÷ 40 = 180
⇒ 30 – 40 ÷ 8 + 70 × 40 = 180
⇒ 30 – 5 + 2800 = 180
⇒ 2830 – 5 ≠ 180

Option (2)
30 + 40 ÷ 8 × 70 – 40 = 340
⇒ 30 ÷ 40 × 8 – 70 + 40 = 340
⇒ 6 – 70 + 40 = 340
⇒ 46 – 70 ≠ 340

Option (3)
30 – 40 × 8 ÷ 70 + 40 = 180
⇒ 30 + 40 – 8 × 70 ÷ 40 = 180
⇒ 30 + 40 – 14 ≠ 180

┤ SYMBOLS & NOTATIONS ├

Option (4)
30 + 40 + 8 × 70 – 40 = 340
$\Rightarrow$ 30 ÷ 40 ÷ 8 – 70 + 40 = 340
$\Rightarrow$ $\dfrac{3}{48}$ – 70 + 40 $\neq$ 340

88. (1)

× $\Rightarrow$ +	– $\Rightarrow$ ÷
/ $\Rightarrow$ –	+ $\Rightarrow$ ×

Option (1)
25 + 10 – 5/10 × 3 = 43
$\Rightarrow$ 25 × 10 ÷ 5 – 10 + 3 = 43
$\Rightarrow$ 25 × 2 – 10 + 3 = 43
$\Rightarrow$ 50 – 10 + 3 = 43
$\Rightarrow$ 53 – 10 = 43
Option (2)
25 – 10 × 5 + 10/3 = 72
$\Rightarrow$ 25 ÷ 10 + 5 × 10 – 3 = 72
$\Rightarrow$ 2.5 + 50 – 3 = 72
$\Rightarrow$ 52.5 – 3 $\neq$ 72
Option (3)
25 × 10/5 + 10 – 3 = 12
$\Rightarrow$ 25 + 10 – 5 × 10 ÷ 3 = 12
$\Rightarrow$ 25 + 10 – $\dfrac{5 \times 10}{3}$ = 12
$\Rightarrow$ 25 + 10 – 16.66 = 12
$\Rightarrow$ 35 – 16.66 $\neq$ 12
Option (4)
25/10 + 5 × 10/3 = 18
$\Rightarrow$ 25 – 10 × 5 + 10 – 3 = 18
$\Rightarrow$ 25 – 50 + 10 – 3 = 18
$\Rightarrow$ 35 – 53 $\neq$ 18

89. (3)

+ $\Rightarrow$ ×	– $\Rightarrow$ +
× $\Rightarrow$ ÷	

128 + 9 – 16 × 4 = ?
$\Rightarrow$? = 128 × 9 + 16 ÷ 4
$\Rightarrow$? = 128 × 9 + 4
$\Rightarrow$? = 1152 + 4 = 1156

90. (4)

+ $\Rightarrow$ ÷	÷ $\Rightarrow$ ×
× $\Rightarrow$ –	– $\Rightarrow$ +

Option (1)
18 × 6 + 7 ÷ 5 – 2 = 16
$\Rightarrow$ 18 – 6 ÷ 7 × 5 + 2 = 16
$\Rightarrow$ 18 – $\dfrac{6}{7}$ × 5 + 2 = 16
$\Rightarrow$ 18 – $\dfrac{30}{7}$ + 2 = 16

$\Rightarrow$ $\dfrac{126 - 30 + 14}{7}$ = 16
$\Rightarrow$ $\dfrac{110}{7} \neq 16$

Option (2)
18 ÷ 6 × 7 + 5 – 2 = 22
$\Rightarrow$ 18 × 6 – 7 ÷ 5 + 2 = 22
$\Rightarrow$ 108 – $\dfrac{7}{5}$ + 2 $\neq$ 22

Option (3)
18 ÷ 6 – 7 + 5 × 2 = 20
$\Rightarrow$ 18 × 6 + 7 ÷ 5 – 2 = 20
$\Rightarrow$ 108 + $\dfrac{7}{5}$ – 2 $\neq$ 20

Option (4)
18 + 6 ÷ 7 × 5 – 2 = 18
$\Rightarrow$ 18 ÷ 6 × 7 – 5 + 2 = 18
$\Rightarrow$ 3 × 7 – 5 + 2 = 18
$\Rightarrow$ 21 – 5 + 2 = 18

91. (3)

+ $\Rightarrow$ ×	$\Rightarrow$ ÷
× $\Rightarrow$ +	÷ $\Rightarrow$ –

Option (1)
12 × 5 + 4 – 5 ÷ 4 = 20
$\Rightarrow$ 12 + 5 × 4 ÷ 5 – 4 = 20
$\Rightarrow$ 12 + 5 × $\dfrac{4}{5}$ – 4 = 20
$\Rightarrow$ 12 + 4 – 4 $\neq$ 20
Option (2)
12 ÷ 5 + 4 – 5 × 4 = 18
$\Rightarrow$ 12 – 5 × 4 ÷ 5 + 4 = 18
$\Rightarrow$ 12 – $\dfrac{5 \times 4}{5}$ + 4 = 18
$\Rightarrow$ 12 – 4 + 4 $\neq$ 18
Option (3)
12 + 5 – 4 × 5 ÷ 4 = 16
$\Rightarrow$ 12 × 5 ÷ 4 + 5 – 4 = 16
$\Rightarrow$ 12 × $\dfrac{5}{4}$ + 5 – 4 = 16
$\Rightarrow$ 15 + 5 – 4 = 16
Option (4)
12 ÷ 5 – 4 × 5 + 4 = 22
$\Rightarrow$ 12 – 5 ÷ 4 + 5 × 4 = 22
$\Rightarrow$ 12 – $\dfrac{5}{4}$ + 20 = 22
$\Rightarrow$ $\dfrac{48 - 5 + 80}{4}$ = 22
$\Rightarrow$ $\dfrac{123}{4}$ $\neq$ 20

92. (2)

÷ $\Rightarrow$ +	+ $\Rightarrow$ ×
× $\Rightarrow$ –	– $\Rightarrow$ ÷

[(1440 – 36 × 16) + 15] + 5 ÷ (144 – 12) + 25 = ?
$\Rightarrow$? = [(1440 ÷ 36 – 16) × 15] × 5 + (144 ÷ 12) × 25
$\Rightarrow$? = [(40 – 16) × 15] × 5 + (12) × 25
$\Rightarrow$? = [24 × 15] × 5 + 300
$\Rightarrow$? = 360 × 5 + 300
$\Rightarrow$? = 1800 + 300 = 2100

93. (1)

+ $\Rightarrow$ ×	– $\Rightarrow$ +
× $\Rightarrow$ ÷	÷ $\Rightarrow$ –

50 + 10 – 50 × 10 ÷ 125 = ?
$\Rightarrow$? = 50 × 10 + 50 ÷ 10 – 125
$\Rightarrow$? = 500 + 5 – 125
$\Rightarrow$? = 505 – 125 = 380

94. (3)

× $\Rightarrow$ –	– $\Rightarrow$ ÷
+ $\Rightarrow$ ×	÷ $\Rightarrow$ +

16 × 8 ÷ 4 – 3 + 9 = ?
$\Rightarrow$? = 16 – 8 + 4 ÷ 3 × 9
$\Rightarrow$? = 16 – 8 + $\dfrac{4}{3}$ × 9
$\Rightarrow$? = 16 – 8 + 12
$\Rightarrow$? = 28 – 8 = 20

95. (2)

– $\Rightarrow$ ÷	+ $\Rightarrow$ ×
÷ $\Rightarrow$ –	× $\Rightarrow$ +

Option (1)
18 ÷ 3 × 2 + 8 – 6 = 10
$\Rightarrow$ 18 – 3 + 2 × 8 ÷ 6 = 10
$\Rightarrow$ 18 – 3 + 2 × $\dfrac{8}{6}$ = 10
$\Rightarrow$ 18 – 3 + $\dfrac{8}{3}$ $\neq$ 10
Option (2)
18 – 3 + 2 × 8 ÷ 6 = 14
$\Rightarrow$ 18 ÷ 3 × 2 + 8 – 6 = 14
$\Rightarrow$ 6 × 2 + 8 – 6 = 14
$\Rightarrow$ 12 + 8 – 6 = 14
Option (3)
18 – 3 ÷ 2 × 8 + 6 = 17
$\Rightarrow$ 18 ÷ 3 – 2 + 8 × 6 = 17
$\Rightarrow$ 6 – 2 + 48 $\neq$ 17
Option (4)
18 × 3 + 2 ÷ 8 – 6 = 15
$\Rightarrow$ 18 + 3 × 2 – 8 ÷ 6 = 15

──────┤ **SYMBOLS & NOTATIONS** ├──────

$\Rightarrow 18 + 6 - \dfrac{8}{6} \neq 15$

96. (1)

$+ \Rightarrow \times$	$- \Rightarrow \div$
$\times \Rightarrow -$	$\div \Rightarrow +$

$6 + 64 - 8 \div 45 \times 8 = ?$
$\Rightarrow ? = 6 \times 64 \div 8 + 45 - 8$
$\Rightarrow ? = 6 \times 8 + 45 - 8$
$\Rightarrow ? = 48 + 45 - 8$
$\Rightarrow ? = 93 - 8 = 85$

97. (4)

$+ \Rightarrow -$	$- \Rightarrow \times$
$\times \Rightarrow \div$	$\div \Rightarrow +$

$2 \div 6 \times 6 \div 2 = ?$
$\Rightarrow ? = 2 + 6 \div 6 + 2$
$\Rightarrow ? = 2 + 1 + 2 = 5$

98. (1)

$+ \Rightarrow \div$	$\div \Rightarrow -$
$- \Rightarrow \times$	$\times \Rightarrow +$

$8 + 4 \div 3 \times 5 - 9 = ?$
$\Rightarrow ? = 8 \div 4 - 3 + 5 \times 9$
$\Rightarrow ? = 2 - 3 + 45$
$\Rightarrow ? = 47 - 3 = \boxed{44}$

99. (*)

$\times \Rightarrow -$	$+ \Rightarrow \times$
$\div \Rightarrow +$	$- \Rightarrow \div$

$175 - 25 \div 5 + 2 \times 3 + 10 = ?$
$\Rightarrow ? = 175 \div 25 + 5 \times 2 - 3 \times 10$
$\Rightarrow ? = 7 + 10 - 30$
$\Rightarrow ? = 17 - 30 = -13$

100. (1)

$- \Rightarrow \div$	$+ \Rightarrow \times$
$\div \Rightarrow -$	$\times \Rightarrow +$

Option (1)
$20 - 4 + 6 \div 9 \times 4 = 25$
$\Rightarrow 20 \div 4 \times 6 - 9 + 4 = 25$
$\Rightarrow 5 \times 6 - 9 + 4 = 25$
$\Rightarrow 30 - 9 + 4 = 25$
Option (2)
$20 + 6 - 4 \times 9 \div 6 = 32$
$\Rightarrow 20 \times 6 \div 4 + 9 - 6 = 32$
$\Rightarrow 30 + 9 - 6 \neq 32$
Option (3)
$20 \div 9 \times 9 - 4 + 6 = 33$
$\Rightarrow 20 - 9 + 9 \div 4 \times 6 = 33$
$\Rightarrow 20 - 9 + \dfrac{9}{4} \times 6 = 33$
$\Rightarrow 20 - 9 + \dfrac{27}{2} = 33$
$\Rightarrow \dfrac{40 - 18 + 27}{2} = 33$
$\Rightarrow 49 \neq 2 \times 33$

Option (4)
$20 \times 4 - 6 - 4 + 9 = 20$
$\Rightarrow 20 + 4 \div 6 \div 4 \times 9 = 20$
$\Rightarrow 20 + \dfrac{4}{6} \times \dfrac{1}{4} \times 9 = 20$
$\Rightarrow 20 + \dfrac{3}{2} \neq 20$

101. (1)

$@ \Rightarrow +$	$\oplus \Rightarrow -$
$a \Rightarrow \div$	$\theta \Rightarrow \times$

$8900 \; a \; 100 \oplus 5 \; \theta \; 4 \oplus 121 \; a \; 11$
$\Rightarrow 8900 \div 100 - 5 \times 4 - 121 \div 11$
$\Rightarrow 89 - 20 - 11$
$\Rightarrow 89 - 31 = 58$

102. (1)

$- \Rightarrow \div$	$+ \Rightarrow \times$
$\div \Rightarrow -$	$\times \Rightarrow +$

Option (1)
$100 + 5 - 10 \times 250 \div 200 = 100$
$\Rightarrow 100 \times 5 \div 10 + 250 - 200 = 100$
$\Rightarrow 50 + 250 - 200 = 100$
Option (2)
$200 + 10 - 20 \times 200 \div 100 = 150$
$\Rightarrow 200 \times 10 \div 20 + 200 - 100 = 150$
$\Rightarrow 100 + 200 - 100 = 150$
$\Rightarrow 300 - 100 \neq 150$
Option (3)
$50 \times 5 \div 10 + 100 - 75 = 50$
$\Rightarrow 50 + 5 - 10 \times 100 \div 75 = 50$
$\Rightarrow 50 + 5 - \dfrac{10 \times 100}{75} = 50$
$\Rightarrow 50 + 5 - \dfrac{40}{3} = 50$
$\Rightarrow \dfrac{150 + 15 - 40}{3} = 50$
$\Rightarrow 165 - 40 = 50 \times 3$
$\Rightarrow 125 \neq 150$
Option (4)
$300 + 5 - 20 \times 200 \div 100 = 200$
$\Rightarrow 300 \times 5 \div 20 + 200 - 100 = 200$
$\Rightarrow 75 + 200 - 100 = 200$
$\Rightarrow 275 - 100 \neq 200$

103. (1)

$- \Rightarrow \times$	$\times \Rightarrow +$
$+ \Rightarrow \div$	$\div \Rightarrow -$

$40 \times 12 + 3 - 6 \div 60 = ?$
$\Rightarrow ? = 40 + 12 \div 3 \times 6 - 60$
$\Rightarrow ? = 40 + 4 \times 6 - 60$
$\Rightarrow ? = 40 + 24 - 60 = \boxed{4}$

104. (4) $25 + 5 \div 2 = 40$
$\Rightarrow (25 \times 2) - (5 \times 2) = 40$
$\Rightarrow 50 - 10 = 40$
$35 + 5 \div 2 = 60$
$\Rightarrow (35 \times 2) - (5 \times 2) = 60$
$\Rightarrow 70 - 10 = 60$
$45 + 5 \div 2$
$\Rightarrow (45 \times 2) - (5 \times 2)$
$\Rightarrow 90 - 10 = 80$

105. (1)

$+ \Rightarrow \div$	$\div \Rightarrow -$
$- \Rightarrow \times$	$\times \Rightarrow +$

$48 + 16 \times 4 - 2 \div 8$
$\Rightarrow 48 \div 16 + 4 \times 2 - 8$
$\Rightarrow 3 + 8 - 8 = \boxed{3}$

106. (2)

$+ \Rightarrow -$	$- \Rightarrow \times$
$\div \Rightarrow +$	$\times \Rightarrow \div$

$15 - 3 + 10 \times 5 \div 5$
$\Rightarrow 15 \times 3 - 10 \div 5 + 5$
$\Rightarrow 45 - 2 + 5 = \boxed{48}$

107. (4)

$\div \Rightarrow -$	$- \Rightarrow +$
$\times \Rightarrow \div$	$+ \Rightarrow \times$

$35 \div 4 - 25 \times 5 + 5$
$\Rightarrow 35 - 4 + 25 \div 5 \times 5$
$\Rightarrow 35 - 4 + 5 \times 5$
$\Rightarrow 35 - 4 + 25$
$\Rightarrow 35 + 25 - 4$
$\Rightarrow 60 - 4 = 56$

108. (3)

$+ \Rightarrow \times$	$- \Rightarrow \div$
$\times \Rightarrow -$	$\div \Rightarrow +$

$16 \div 4 \times 10 - 5 + 8 = ?$
$\Rightarrow ? = 16 + 4 - 10 \div 5 \times 8$
$\Rightarrow ? = 16 + 4 - 2 \times 8$
$\Rightarrow ? = 16 + 4 - 16 = \boxed{4}$

109. (4)

$+ \Rightarrow \div$	$- \Rightarrow \times$
$\div \Rightarrow +$	$\times \Rightarrow -$

$36 \times 12 + 4 \div 6 + 2 - 3 = ?$
$\Rightarrow ? = 36 - 12 \div 4 + 6 \div 2 \times 3$
$\Rightarrow ? = 36 - 3 + 3 \times 3$
$\Rightarrow ? = 36 + 9 - 3 = \boxed{42}$

110. (2)

$+ \Rightarrow /$	$/ \Rightarrow -$
$- \Rightarrow \times$	$\times \Rightarrow +$

$24 + 8/2 - 6 \times 6 = ?$
$\Rightarrow ? = 24 \div 8 - 2 \times 6 + 6$
$\Rightarrow ? = 3 - 2 \times 6 + 6$
$\Rightarrow ? = 3 - 12 + 6 = -3$

| SYMBOLS & NOTATIONS |

111. (2)

$+ \Rightarrow \div$	$- \Rightarrow \times$
$\times \Rightarrow -$	$\div \Rightarrow +$

$16 \div 8 - 4 + 2 \times 4 = ?$

$\Rightarrow ? = 16 + 8 \times 4 \div 2 - 4$

$\Rightarrow ? = 16 + 8 \times 2 - 4$

$\Rightarrow ? = 16 + 16 - 4 = \boxed{28}$

112. (2)

$\times \Rightarrow +$	$+ \Rightarrow \div$
$- \Rightarrow \times$	$\div \Rightarrow -$

$8 \times 7 - 8 + 40 \div 2 = ?$

$\Rightarrow ? = 8 + 7 \times 8 \div 40 - 2$

$\Rightarrow ? = 8 + 7 \times \dfrac{8}{40} - 2$

$\Rightarrow 8 + \dfrac{7}{5} - 2$

$\Rightarrow ? = \dfrac{40 + 7 - 10}{5}$

$\Rightarrow ? = \dfrac{37}{5}$

113. (2) $8 \times 20 \div 3 + 9 - 5 = 38$

$\Rightarrow 8 \times 20 \div 5 + 9 - 3 = 38$

$\Rightarrow 8 \times 4 + 9 - 3 = 38$

$\Rightarrow 32 + 9 - 3 = 38$

114. (1)

$+ \Rightarrow \times$	$- \Rightarrow +$
$\times \Rightarrow \div$	$\div \Rightarrow -$

Option (1)

$9 + 8 - 4 \times 2 \div 18 = 56$

$\Rightarrow 9 \times 8 + 4 \div 2 - 18 = 56$

$\Rightarrow 72 + 2 - 18 = 56$

$\Rightarrow 74 - 18 = 56$

Option (2)

$9 \times 8 + 4 \div 2 - 18 = 26$

$\Rightarrow 9 \div 8 \times 4 - 2 + 18 = 26$

$\Rightarrow \dfrac{9}{8} \times 4 - 2 + 18 = 26$

$\Rightarrow \dfrac{9 - 4 + 36}{2} = 26$

$\Rightarrow 45 - 4 \neq 26 \times 2$

Option (3)

$9 \times 8 \div 4 + 2 - 18 = 200$

$\Rightarrow 9 \div 8 - 4 \times 2 + 18 = 200$

$\Rightarrow \dfrac{9}{8} - 8 + 18 = 200$

$\Rightarrow \dfrac{9 - 64 + 144}{8} = 200$

$\Rightarrow 153 - 64 \neq 200 \times 8$

Option (3)

$9 - 8 \times 4 + 2 \div 18 = 203$

$\Rightarrow 9 + 8 \div 4 \times 2 - 18 = 203$

$\Rightarrow 9 + 2 \times 2 - 18 \neq 203$

115. (*)

$- \Rightarrow \div$	$+ \Rightarrow \times$
$\div \Rightarrow -$	$\times \Rightarrow +$

Option (1)

$43 \times 7 \div 5 + 4 - 8 = 25$

$\Rightarrow 43 + 7 - 5 \times 4 \div 8 = 25$

$\Rightarrow 43 + 7 - \dfrac{5}{2} \neq 25$

Option (2)

$48 \div 5 + 8 \times 10 - 2 = 03$

$\Rightarrow 48 - 5 \times 8 + 10 \div 2 = 03$

$\Rightarrow 48 - 40 + 5 = 03$

$\Rightarrow 53 - 40 \neq 03$

Option (3)

$36 \times 4 - 12 + 5 \div 3 = 420$

$\Rightarrow 36 + 4 \div 12 \times 5 - 3 = 420$

$\Rightarrow 36 + \dfrac{5}{3} - 3 \neq 420$

Option (4)

$42 + 5 \div 6 \times 8 - 3 = 28$

$\Rightarrow 42 \times 5 - 6 + 8 \div 3 = 28$

$\Rightarrow 210 - 6 + \dfrac{8}{3} \neq 28$

116. (1)

$P \Rightarrow +$	$Q \Rightarrow \times$
$R \Rightarrow \div$	$S \Rightarrow -$

$44 \, Q \, 9 \, R \, 12 \, S \, 6 \, Q \, 4 \, P \, 16 = ?$

$\Rightarrow ? = 44 \times 9 \div 12 - 6 \times 4 + 16$

$\Rightarrow ? = 44 \times \dfrac{9}{12} - 6 \times 4 + 16$

$\Rightarrow ? = 11 \times 3 - 6 \times 4 + 16$

$\Rightarrow ? = 33 - 24 + 16$

$\Rightarrow ? = 49 - 24 = \boxed{25}$

117. (2)

$+ \Rightarrow -$	$- \Rightarrow \times$
$\div \Rightarrow +$	$\times \Rightarrow \div$

$15 - 3 + 10 \times 5 \div 5$

$\Rightarrow 15 \times 3 - 10 \div 5 + 5$

$\Rightarrow 45 - 2 + 5 = \boxed{48}$

118. (1)

$+ \Rightarrow \times$	$- \Rightarrow +$
$\times \Rightarrow \div$	$\div \Rightarrow -$

$12 \times 2 + 6 - 7 \div 5 = ?$

$\Rightarrow ? = 12 \div 2 \times 6 + 7 - 5$

$\Rightarrow ? = 6 \times 6 + 7 - 5$

$\Rightarrow ? = 36 + 7 - 5 = \boxed{38}$

TYPE-I (ii)

1. (2)

$\rightarrow \Rightarrow +$	$\leftarrow \Rightarrow -$
$\uparrow \Rightarrow \div$	$\downarrow \Rightarrow \times$
$\nearrow \Rightarrow =$	

Option (1)

$2 \downarrow 5 \leftarrow 6 \rightarrow 2 \nearrow 6$

After putting the value of signs

$2 \times 5 - 6 + 2 = 6$

or, $10 - 6 + 2 = 6$

TYPE-I (iii)

1. (2)

$a \rightarrow \div$	$b \rightarrow +$
$c \rightarrow -$	$d \rightarrow \times$

Given expression

$24 \, a \, 6 \, d \, 4 \, b \, 9 \, c \, 8 = ?$

After conversion

$? = 24 \div 6 \times 4 + 9 - 8$

or, $? = 4 \times 4 + 9 - 8$

or, $? = 16 + 9 - 8$

or, $? = 25 - 8 = 17$

2. (4)

$A \Rightarrow +$	$B \Rightarrow -$	$C \Rightarrow \div$
$D \Rightarrow \times$	$E \Rightarrow <$	$F \Rightarrow >$
$G \Rightarrow =$		

Option (4)

$9 \, A \, 7 \, B \, 4 \, C \, 2 \, G \, 14$

$\Rightarrow 9 + 7 - 4 \div 2 = 14$

$\Rightarrow 9 + 7 - 2 = 14$

3. (3)

$P \Rightarrow +$	$Q \Rightarrow -$
$R \Rightarrow \div$	$S \Rightarrow \times$

$18 \, S \, 36 \, R \, 12 \, Q \, 6 \, P \, 7 = ?$

or, $? = 18 \times 36 \div 12 - 6 + 7$

or, $? = 18 \times 3 - 6 + 7$

or, $? = 54 - 6 + 7$

or, $? = 61 - 6 = 55$

4. (4)

$A \Rightarrow =$	$B \Rightarrow <$	$C \Rightarrow >$
$D \Rightarrow \ngtr$	$E \Rightarrow \neq$	$F \Rightarrow \nless$

Premises

$3 \, X \, B \neq 2Y$ and $2YDZ$

or, $3 \, X < 2Y$ and $2Y \ngtr Z$

It is clear that $2Y$ is either equal to or less than Z.

Thus, $3 \, X < Z$

Option (1)

$3 \, X \, AZ = 3X = Z :$ Not true

Option (2)

$3 \, X \, DZ = 3X \ngtr Z$

⊣ SYMBOLS & NOTATIONS ⊢

The equation implies that 3 X is either equal to or less than Z. Therefore, the given equation is not true.

Option (3)

3 X FZ = 3 X ≮ Z

It is also not true.

Option (4)

3X BZ = 3 X < Z

Clearly 3 X is less than Z.

5. (2) **Premises**

7 X < 3 Y and

6 Y ⯒ 2 Z

or, 6Y ≤ 2Z

Therefore,

7X < 2Z ⇒ 7 X B 2Z

6. (2)

J ⇒ +	K ⇒ −
L ⇒ ÷	M ⇒ ×

Given expression

18 M 36 L 12 K 6 J 7 = ?

After conversion

? = 18 × 36 ÷ 12 − 6 + 7

or, ? = 18 × 3 − 6 + 7

or, ? = 54 − 6 + 7 = $\boxed{55}$

7. (4) **Option (1)**

15 C 15 B 8 F 4 B 6 C 3

⇒ 15 ÷ 15 + 8 < 4 + 6 ÷ 3

⇒ 1 + 8 ≮ 4 + 2

Option (2)

15 B 5 G 8 B 4 G 6 F 3

⇒ 15 + 5 − 8 + 4 − 6 < 3

⇒ 24 − 14 ≮ 3

Option (3)

15 A 5 E 8 C 4 B 6 E 3

⇒ 15 > 5 × 8 ÷ 4 + 6 × 3

⇒ 15 ≮ 10 + 18

Option (4)

15 C 5 F 8 C 4 B 6 C 3

⇒ 15 ÷ 5 < 8 ÷ 4 + 6 ÷ 3

⇒ 3 < 2 + 2

8. (3)

A → +	B → −
C → ×	D → +

Option (1)

8 B 6 D 2 A 4 C 3 = 15

or, 8 − 6 ÷ 2 + 4 × 3 = 15

or, 8 − 3 + 4 × 3 = 15

or, 8 − 3 + 12 = 15

or, 20 − 3 = 15

or, 17 ≠ 15

Option (2)

9 C 9 B 9 D 9 A 9 = 17

or, 9 × 9 − 9 ÷ 9 + 9 = 17

or, 9 × 9 − 1 + 9 = 17

or, 81 − 1 + 9 = 17

or, 90 − 1 ≠ 17

Option (3)

8 A 8 B 8 C 8 = −48

or, 8 + 8 − 8 × 8 = −48

or, 8 + 8 − 64 = −48

or, 16 − 64 = − 48

9. (2)

A → ×	D → +
G → −	

Given expression

7 A 4 D 4 A 3 G 2

After conversion

? = 7 × 4 + 4 × 3 − 2

or, ? = 28 + 12 − 2

or, ? = 40 − 2 = 38

10. (2)

L ⇒ M	M ⇒ −
N ⇒ ×	P ⇒ ÷

Given expression

5 N 5 P 5 L 5 M 5 = ?

After changing the signs

? = 5 × 5 ÷ 5 + 5 − 5

or, ? = 5 + 5 − 5 = 5

11. (1)

L ⇒ +	M ⇒ −
N ⇒ ×	P ⇒ ÷

Given expression

14 N 10 L 42 P 2 M 8 = ?

After changing the signs

? = 14 × 10 + 42 ÷ 2 − 8

or, ? = 14 × 10 + 21 − 8

or, ? = 140 + 21 − 8 = $\boxed{153}$

12. (2) **Option (1)**

18 F 3 B 6 E 8 G 4 E 12

or, 18 < 3 + 6 × 8 − 4 × 12

or, 18 < 3 + 48 − 48

or, 18 ≮ 3

Option (2)

18 C 3 G 6 B 8 4 D 12

or, 18 ÷ 3 − 6 + 8 + 4 = 12

or, 6 − 6 + 12 = 12

or, 12 = 12

Option (3)

18 A 3 E 6 B 8 G 4 B 12

or, 18 > 3 × 6 + 8 − 4 +12

or, 18 > 18 + 8 − 4 + 12

or, 18 > 34

Option (4)

18 C 3 D 6 B 8 C 4 G 12

or, 18 ÷ 3 = 6 + 8 ÷ 4 − 12

or, 6 = 6 + 2 − 12

or, 6 ≠ 4

13. (2)

P ⇒ −	Q ⇒ ×
R ⇒ ÷	S ⇒ +

14 × 3 − 12 + 4 ÷ 2

⇒ 42 − 12 + 2 ⇒ 44 − 12 = $\boxed{32}$

14. (3)

L ⇒ ×	M ⇒ ÷
P ⇒ +	Q ⇒ −

16 P 24 M 8 Q 6 M 2 L 3 = ?

⇒ ? = 16 + 24 ÷ 8 − 6 ÷ 2 × 3

⇒ ? = 16 + 3 − 3 × 3

⇒ ? = 16 + 3 − 9 = $\boxed{10}$

15. (3)

A ⇒ +	M ⇒ ×	L ⇒ <
D ⇒ ÷	G ⇒ >	

20 A 4 D 4 L 4 A 6 D 2

⇒ 20 + 4 ÷ 4 < 4 + 6 ÷ 2

⇒ 20 + 1 ≮ 4 + 3

20 D 5 G 8 D 4 A 6 M 3

⇒ 20 ÷ 5 > 8 ÷ 4 + 6 × 3

⇒ 4 ≯ 2 + 18

20 D 4 A 4 L 4 A 2 M 3

⇒ 20 ÷ 4 + 4 < 4 + 2 × 3

⇒ 5 + 4 < 4 + 6

20 A 2 G 10 M 3 A 12 D 2

⇒ 20 + 2 > 10 × 3 + 12 ÷ 2

⇒ 22 ≯ 30 + 6

16. (3)

X ⇒ +	Z ⇒ ÷
Y ⇒ −	P ⇒ ×

10 P 2 X 5 Y 5 = ?

⇒ ? = 10 × 2 + 5 − 5

⇒ ? = 20 + 5 − 5 = $\boxed{20}$

17. (1)

P ⇒ +	Q ⇒ ×
R ⇒ ÷	S ⇒ −

44 Q 9 R 12 S 6 Q 4 P 16 = ?

⇒ ? = 44 × 9 − 12 − 6 × 4 + 16

⇒ ? = $44 \times \dfrac{3}{4} - 24 + 16$

⇒ ? = 33 − 24 + 16 = $\boxed{25}$

18. (1)

R ⇒ −	A ⇒ +
B ⇒ ÷	C ⇒ ×

25 A 37 C 2 B 4 R 1 = ?

⇒ ? = 25 + 37 × 2 ÷ 4 − 1

| SYMBOLS & NOTATIONS |

$? = 62 \times 2 \div 4 + 1$

$? = 124 \div 4 + 1$

$? = 31 + 1 = \boxed{32}$

19. (3)

$P \Rightarrow \div$	$Q \Rightarrow \times$
$R \Rightarrow +$	$S \Rightarrow -$

12 Q 15 P 3 R 4 S 6 = ?

$\Rightarrow 12 \times 15 \div 3 + 4 - 6$

$\Rightarrow 12 \times 5 + 4 - 6$

$\Rightarrow 60 + 4 - 6 = \boxed{58}$

20. (*)

$+ \Rightarrow >$	$\times \Rightarrow =$	$- \Rightarrow \geq$
$L \Rightarrow \neq$	$| \Rightarrow <$	$\phi \Rightarrow \leq$

A – B ϕ C

$\Rightarrow A \geq B \leq C$

$\Rightarrow A > B < C$ or, $A > B = C$

or, $A = B = C$ or, $A = B < C$

Option (1)

A | B + C

$\Rightarrow A < B > C$: Not True

Option (2)

A | B | C

$\Rightarrow A < B < C$: Not True

Option (3)

A + B – C

$\Rightarrow A > B \geq C$

$\Rightarrow A > B = C$

or, $A > B > C$

Option (4)

A ϕ B | C

$\Rightarrow A \leq B < C$

$\Rightarrow A < B < C$

or, $A = B < C$

Both the options (3) and (4) may be true.

21. (*)

$A \Rightarrow +$	$Q \Rightarrow -$
$V \Rightarrow \times$	$R \Rightarrow \div$

225 R 5 A 64 Q 13 V 6 = ?

$\Rightarrow ? = 225 \div 5 + 64 - 13 \times 6$

$\Rightarrow ? = 45 + 64 - 78 = \boxed{31}$

22. (3)

$P \Rightarrow \times$	$T \Rightarrow -$
$M \Rightarrow +$	$B \Rightarrow \div$

12 P 6 M 1 5 T 16 B 4 = ?

$\Rightarrow ? = 12 \times 6 + 15 - 16 \div 4$

$\Rightarrow ? = 72 + 15 - 4 = \boxed{83}$

23. (2)

$+ \Rightarrow >$	$\phi \Rightarrow \leq$	$- \Rightarrow \geq$
$\times \Rightarrow =$	$| \Rightarrow <$	$L \Rightarrow \neq$

A | B $\times$ C

$\Rightarrow A < B = C$

Option (1)

B + C | A

$\Rightarrow B > C < A$

Option (2)

C – B + A

$\Rightarrow C \geq B > A$

Option (3)

B | A | C

$\Rightarrow B < A < C$

Option (4)

A ϕ B | C

$\Rightarrow A \leq B < C$

24. (3)

$A \Rightarrow \leq$	$B \Rightarrow =$	$C \Rightarrow <$
$D \Rightarrow \geq$	$E \Rightarrow \neq$	$F \Rightarrow >$

2 M B N

$\Rightarrow 2 M = N \Rightarrow M = \dfrac{N}{2}$

2 N A 3K

$\Rightarrow 2 N \leq 3K \Rightarrow 4M \leq 3K$

Option (1)

2 M D 3K

$\Rightarrow 2 M \geq 3K$: Not True

Option (2)

2 M B 3 K

$\Rightarrow 2 M = 3 K$: Not True

Option (3)

2 M C 3 K

$\Rightarrow 2 M < 3 K$: True

Option (4)

2 K B 3 N

$\Rightarrow 2 K = 3 N$: Not True

25. (*)

$B \Rightarrow +$	$G \Rightarrow -$	$E \Rightarrow \times$	$C \Rightarrow \div$
$D \Rightarrow =$	$A \Rightarrow >$	$F \Rightarrow <$	

Option (1)

15 C 3 B 2 A 6 E 2

$\Rightarrow 15 \div 3 + 2 > 6 \times 2$

$\Rightarrow 5 + 2 \ngtr 12$

Option (2)

15 B 2 G 5 A 4 G 4

$\Rightarrow 15 + 2 - 5 > 4 - 4$

$\Rightarrow 12 > 0$

Option (3)

15 C 3 B 2 D 6 B 1

$\Rightarrow 15 \div 3 + 2 = 6 + 1$

$\Rightarrow 5 + 2 = 7$

Option (4)

15 B 3 D 4 E 6

$\Rightarrow 15 + 3 = 4 \times 6$

$\Rightarrow 18 \neq 24$

Both options (2) and (3) are correct.

26. (2)

$A \Rightarrow +$	$B \Rightarrow -$	$C \Rightarrow \times$

(10 C 4) A (4C4) B6 = ?

$\Rightarrow ? = (10 \times 4) + (4 \times 4) - 6$

$\Rightarrow ? = 40 + 16 - 6 = \boxed{50}$

27. (3)

$P \Rightarrow +$	$Q \Rightarrow -$
$R \Rightarrow \div$	$S \Rightarrow \times$

18 S 36 R 12 Q 6 P 7 = ?

$\Rightarrow ? = 18 \times 36 \div 12 - 6 + 7$

$\Rightarrow ? = 18 \times 3 - 6 + 7$

$\Rightarrow ? = 54 - 6 + 7$

$\Rightarrow ? = 61 - 6 = \boxed{55}$

28. (2)

$P \Rightarrow \div$	$Q \Rightarrow \times$
$R \Rightarrow +$	$S \Rightarrow -$

18 Q 12 P 4 R 5 S 6

$\Rightarrow 18 \times 12 \div 4 + 5 - 6$

$\Rightarrow 18 \times 3 + 5 - 6$

$\Rightarrow 54 + 5 - 6 = 53$

29. (2)

$A \Rightarrow +$	$B \Rightarrow \times$
$C \Rightarrow \div$	$D \Rightarrow -$

9 A 2 B 6 D 4 C 2 = ?

$\Rightarrow ? = 9 + 2 \times 6 - 4 \div 2$

$\Rightarrow ? = 9 + 12 - 2 = 19$

30. (3)

$D \Rightarrow \times$	$S \Rightarrow +$
$A \Rightarrow -$	$M \Rightarrow \div$

28 D 6 S 34 M 2 A 8 D 6

$\Rightarrow 28 \times 6 + 34 \div 2 - 8 \times 6$

$\Rightarrow 168 + 17 - 48$

$\Rightarrow 185 - 48 = 137$

31. (2)

$A \Rightarrow +$	$B \Rightarrow -$
$C \Rightarrow \times$	

(10 C 4) A (4 C 4) B 6 = ?

$\Rightarrow ? = (10 \times 4) + (4 \times 4) - 6$

$\Rightarrow ? = 40 + 16 - 6 = 50$

32. (2)

$a \Rightarrow \times$	$b \Rightarrow \div$
$c \Rightarrow +$	$d \Rightarrow -$

8 a 3 c 24 b 12 d 19 = ?

$\Rightarrow ? = 8 \times 3 + 24 \div 12 - 19$

$\Rightarrow ? = 24 + 2 - 19 = 7$

33. (4)

$A \Rightarrow -$	$C \Rightarrow \times$
$D \Rightarrow \div$	$E \Rightarrow +$

14 C 3 A 12 E 4 D 2 = ?

$\Rightarrow ? = 14 \times 3 - 12 + 4 \div 2$

$\Rightarrow ? = 42 - 12 + 2$

$\Rightarrow ? = 44 - 12 = \boxed{32}$

| SYMBOLS & NOTATIONS |
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34. (2)

A $\Rightarrow$ +	B $\Rightarrow$ –
C $\Rightarrow$ ×	D $\Rightarrow$ ÷

Option (1)

   8 B 6 D 2 A 4 C 3 = 15

$\Rightarrow$ 8 – 6 ÷ 2 + 4 × 3 = 15

$\Rightarrow$ 8 – 3 + 4 × 3 = 15

$\Rightarrow$ 8 – 3 + 12 = 15

$\Rightarrow$ 20 – 3 ≠ 15

Option (2)

   8 A 8 B 8 C 8 = – 48

$\Rightarrow$ 8 + 8 – 8 × 8 = – 48

$\Rightarrow$ 16 – 64 = – 48

Op tion (3)

   9 C 9 B 9 D 9 A 9 = 17

$\Rightarrow$ 9 × 9 – 9 ÷ 9 + 9 = 17

$\Rightarrow$ 81 – 1 + 9 = 17

$\Rightarrow$ 90 – 1 ≠ 17

Option (4)

   3 A 3 B 3 C 3 A 3 D 3 = 4

$\Rightarrow$ 3 + 3 – 3 × 3 + 3 ÷ 3 = 4

$\Rightarrow$ 3 + 3 – 9 + 1 = 4

$\Rightarrow$ 7 – 9 ≠ 4

35. (2)

P $\Rightarrow$ ×	T $\Rightarrow$ –
M $\Rightarrow$ +	B $\Rightarrow$ ÷

   28 B 7 P 8 T 6 M 4 = ?

$\Rightarrow$? = 28 ÷ 7 × 8 – 6 + 4

$\Rightarrow$? = 4 × 8 – 6 + 4

$\Rightarrow$? = 32 – 6 + 4 = 30

36. (4)

L $\Rightarrow$ ×	M $\Rightarrow$ ÷
P $\Rightarrow$ +	Q $\Rightarrow$ –

   16 P 24 M 8 Q 6 M 2 L 3

$\Rightarrow$ 16 + 24 ÷ 8 – 6 ÷ 2 × 3

$\Rightarrow$ 16 + 3 – 9 = $\boxed{10}$

37. (1)

L $\Rightarrow$ +	M $\Rightarrow$ –
N $\Rightarrow$ ×	P $\Rightarrow$ ÷

   14 N 10 L 42 P 2 M 8 = ? $\Rightarrow$
? = 14 × 10 + 42 ÷ 2 – 8

$\Rightarrow$? = 140 + 21 – 8

$\Rightarrow$? = 161 – 8 = $\boxed{153}$

38. (1)

P $\Rightarrow$ ÷	Q $\Rightarrow$ ×
R $\Rightarrow$ +	S $\Rightarrow$ –

   18 Q 12 P 4 R 5 S 6 = ?

$\Rightarrow$? = 18 × 12 ÷ 4 + 5 – 6

$\Rightarrow$? = 18 × 3 + 5 – 6

$\Rightarrow$? = 54 + 5 – 6 = $\boxed{53}$

39. (1)

K $\Rightarrow$ –	L $\Rightarrow$ ÷
M $\Rightarrow$ +	D $\Rightarrow$ ×

   96 L 4 K 6 M 11 D 9 = ?

$\Rightarrow$? = 96 ÷ 4 – 6 + 11 × 9

$\Rightarrow$? = 24 – 6 + 99

$\Rightarrow$? = 123 – 6 = $\boxed{117}$

TYPE-I (iv)

1. (2)

X $\Rightarrow$ +	V $\Rightarrow$ –	U $\Rightarrow$ =	σ $\Rightarrow$ <
∧ $\Rightarrow$ ÷	Σ $\Rightarrow$ ×	℧ $\Rightarrow$ >	

Option (1)

3 X 8 V 2 U 12 ∧ 3

$\Rightarrow$ 13 + 8 – 2 = 12 ÷ 3

$\Rightarrow$ 9 ≠ 4

Option (2)

13 V 12 X 9 V 2 ℧ 5 Σ 1

$\Rightarrow$ 13 – 12 + 9 – 2 > 5 × 1

$\Rightarrow$ 8 > 5

Option (3)

2 Σ 3 Σ 4 σ 5 1 ∧ 3

$\Rightarrow$ 2 × 3 × 4 < 51 ÷ 3

$\Rightarrow$ 24 ≮ 17

Option (4)

3 Σ 2 Σ 4 U 2 X 7 V 3

$\Rightarrow$ 3 × 2 × 4 = 2 + 7 – 3

$\Rightarrow$ 24 ≠ 6

2. (4)

+ $\Rightarrow$ δ	– $\Rightarrow$ ●	× $\Rightarrow$ γ	÷ $\Rightarrow$ η
= $\Rightarrow$ ω	> $\Rightarrow$ β	<> $\Rightarrow$ α	

Option (1)

3 γ 6 η 2 δ 8   4 ω 5

$\Rightarrow$ 3 × 6 ÷ 2 + 8 – 4 = 5

$\Rightarrow$ 3 × 3 + 8 – 4 = 5

$\Rightarrow$ 17 – 4 ≠ 5

Option (2)

3 η 6 γ 2 δ 8   4 β 5

$\Rightarrow$ 3 ÷ 6 × 2 + 8 – 4 > 5

$\Rightarrow$ $\dfrac{3}{6}$ × 2 + 8 – 4 > 5

$\Rightarrow$ 1 + 8 – 4 ≯ 5

Option (3)

3 γ 6   2 δ 8 η 4 ∝ 5

$\Rightarrow$ 3 × 6 – 2 + 8 ÷ 4 < 5

$\Rightarrow$ 3 × 6 – 2 + 2 < 5

$\Rightarrow$ 18 – 2 + 2 ≮ 5

Option (4)

3 δ 6   2 γ 8 η 4 ω 5

$\Rightarrow$ 3 + 6 – 2 × 8 ÷ 4 = 5

$\Rightarrow$ 3 + 6 – 2 × 2 = 5

$\Rightarrow$ 9 – 4 = 5

3. (1)

M	A	S	T	E	R
↓	↓	↓	↓	↓	↓
#	∇	H	$	%	@

4. (4) & is the brother of ≠.

≠ is the daughter of @.

is the brother of @.

Therefore, # is the uncle of &.

5. (*)   – $\Rightarrow$ not less than

It means ≥

X – Y – Z

$\Rightarrow$ X ≥ Y ≥ Z

$\Rightarrow$ X > Y > Z

or, X > Y = Z

or, X = Y > Z

or, X = Y = Z

Option (1)

X ⊗ Y ∆ Z

$\Rightarrow$ X > Y or, X < Y ; Y = Z

Option (2)

X O Y + Z

$\Rightarrow$ X ≤ Y > Z

Option (3)

X ∅ Y – Z

$\Rightarrow$ X < Y ≥ Z

Option (4)

X ∅ Y + Z

$\Rightarrow$ X < Y > Z

6. (4) {(13 % 5) $ 6} # 15

$\Rightarrow$ {(5^2 – 13^2) ÷ 6^2} × 2 × 15

$\Rightarrow$ {(25 – 169) ÷ 36} × 30

$\Rightarrow$ {–144 ÷ 36} × 30

$\Rightarrow$ –4 × 30 = –120

7. (1)

@ $\Rightarrow$ +	⊕ $\Rightarrow$ –
α $\Rightarrow$ ÷	⊖ $\Rightarrow$ ×

107 ⊖ 3 ⊕ 64 α 8 ⊕ 2 ⊖ 9 = ?

$\Rightarrow$? = 107 × 3 – 64 ÷ 8 – 2 × 9

$\Rightarrow$? = 321 – 8 – 18

$\Rightarrow$? = 321 – 26 = 295

8. (*) 324 ⊕ 289

$\Rightarrow$ $\sqrt{324}$ + $\sqrt{289}$

$\Rightarrow$ 18 + 17 = 35

   441 ⊕ 484

$\Rightarrow$ $\sqrt{441}$ + $\sqrt{484}$

$\Rightarrow$ 21 + 22 = 43

Therefore, 625 ⊕ 400

$\Rightarrow$ $\sqrt{625}$ + $\sqrt{400}$

$\Rightarrow$ 25 + 20 = 45

9. (4)

# $\Rightarrow$ –	& $\Rightarrow$ ÷
@ $\Rightarrow$ +	% $\Rightarrow$ ×

217 & 7 # 3 @ 2 % 7 = ?

$\Rightarrow$? = 217 ÷ 7 – 3 + 2 × 7

$\Rightarrow$? = 31 – 3 + 14

$\Rightarrow$? = 45 – 3 = $\boxed{42}$

| SYMBOLS & NOTATIONS |

TYPE-I (v)

1. (1) $(\square \times \triangle) \div \diamondsuit = ?$

$\Rightarrow ? = (8 \times 3) \div 4$

$\Rightarrow ? = 24 \div 4 = 6 \Rightarrow \bigcirc 017$

2. (2) $(\triangle + \square) \div O = ?$

$= (15 + 12) \div 3 = 27 \div 3 = 9$

3. (1) $(12 \times 4) \div 6 = ?$

or, $? = \dfrac{48}{6} = 8$

4. (3) $\triangle + \bigcirc - \square = ?$

$? = 15 + 3 - 12$

or, $? = 18 - 12 = 6 = \square$

5. (1) $\square \div \diagup\square = ?$

or, $12 \div 4 = 3 \Rightarrow \bigcirc$

6. (3) $\dfrac{\text{Rectangle} + \text{Square}}{\text{Triangle}}$

$\Rightarrow \dfrac{12 + 6}{15} = \dfrac{18}{15} = \dfrac{6}{5}$

7. (3)
$$[\;\;] \quad \cap \quad \cup \quad () \\ \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow \\ \;4 \quad\;\; 5 \quad\;\; 9 \quad\;\; 0 \quad\;\; 6$$

8. (2) $24 \,\triangle\, 4 \,\triangle\, 5 \,\triangle\, 4$

$\Rightarrow 24 = 4 \times 5 + 4$

9. (4)
$$\square \;\; O \;\; W \;\; \triangle \;\; | \\ \square \;\; O \;\; W \;\; \triangle \;\; | \\ \square \;\; O \;\; W$$

10. (4)

# $\Rightarrow$ <	$O \Rightarrow$ >	$\square \Rightarrow$ =

$a \bigcirc b \,\#\, c \,\square\, d$

$\Rightarrow a > b < c = d$

Option (1)

$a \,\square\, c \Rightarrow a = c$: Not True

Option (2)

$b \bigcirc d \Rightarrow b > d$: Not True

Option (3)

$b \,\square\, d \Rightarrow b = d$: Not True

Option (4)

$b \,\#\, d \Rightarrow b < d$: True

11. (1)

* $\Rightarrow$ −	− $\Rightarrow$ ÷
$\square \Rightarrow$ +	% $\Rightarrow$ ×

$13 \,\square\, 3 * 6 \,\%\, 8 - 4 \,\square\, 14 = ?$

$\Rightarrow ? = 13 + 3 - 6 \times 8 \div 4 + 14$

$\Rightarrow ? = 13 + 3 - 6 \times 2 + 14$

$\Rightarrow ? = 13 + 3 - 12 + 14$

$\Rightarrow ? = 30 - 12 = \boxed{18}$

TYPE-I (vi)

1. (4) **Option (1)**

$6 > 3 < 2 \wedge 4 \vee 8 - 13$

or, $6 \div 3 + 2 - 4 \times 8 > 13$

or, $2 + 2 - 32 > 13$

or, $-28 \not> 13$

Option (2)

$6 \wedge 3 < 2 > 4 \vee 8 + 13$

or, $6 - 3 + 2 \div 4 \times 8 = 13$

or, $6 - 3 + \dfrac{2}{4} \times 8 = 13$

or, $6 - 3 + 4 \neq 13$

Option (3)

$6 \vee 3 \wedge 2 > 4 < 8 \times 13$

or, $6 \times 3 - 2 \div 4 + 8 < 13$

or, $6 \times 3 - \dfrac{2}{4} + 8 < 13$

or, $18 - \dfrac{2}{4} + 8 < 13$

or, $\dfrac{72 - 2 + 32}{4} \not< 13$

Option (4)

$6 \vee 3 > 2 < 4 \wedge 8 \times 13$

or, $6 \times 3 \div 2 + 4 - 8 < 13$

or, $\dfrac{6 \times 3}{2} + 4 - 8 < 13$

or, $9 + 4 - 8 = 13$

2. (4) **Option (1)**

$6 > 2 > 3 \,\hat{}\, 8 \vee 4 + 13$

$\Rightarrow 6 + 2 \div 3 - 8 \times 4 = 13$

$\Rightarrow 6 + \dfrac{2}{3} - 32 \neq 13$

Option (2)

$6 \,\hat{}\, 2 < 3 > 8 < 4 - 13$

$\Rightarrow 6 - 2 + 3 \div 8 + 4 > 13$

$\Rightarrow 6 - 2 + \dfrac{3}{8} + 4 > 13$

$\Rightarrow \dfrac{48 - 16 + 3 + 32}{8} > 13$

$\Rightarrow \dfrac{67}{8} \not> 13$

Option (3)

$6 \vee 2 < 3 \,\hat{}\, 8 > 4 \times 13$

$\Rightarrow 6 \times 2 + 3 - 8 \div 4 < 13$

$\Rightarrow 12 + 3 - 2 < 13$

$\Rightarrow 13 \not< 13$

Option (4)

$6 > 2 \vee 3 < 8 \,\hat{}\, 4 + 13$

$\Rightarrow 6 \div 2 \times 3 + 8 - 4 = 13$

$\Rightarrow 3 \times 3 + 8 - 4 = 13$

$\Rightarrow 9 + 8 - 4 = 13$

3. (3)

÷ $\Rightarrow$ >	× $\Rightarrow$ +
+ $\Rightarrow$ ÷	− $\Rightarrow$ =
> $\Rightarrow$ ×	= $\Rightarrow$ <
< $\Rightarrow$ −	

Option (1)

$5 > 2 < 1 - 3 \times 4 \times 1$

or, $5 \times 2 - 1 = 3 + 4 + 1$

or, $9 \neq 8$

Option (2)

$5 < 2 \times 1 \div 3 > 4 \times 1$

or, $5 - 2 + 1 > 3 \times 4 + 1$

or, $4 \not> 13$

Option (3)

$5 > 2 \times 1 - 3 > 4 < 1$

or, $5 \times 2 + 1 = 3 \times 4 - 1$

or, $11 = 11$

Option (4)

$5 + 2 \times 1 = 3 + 4 > 1$

or, $5 \div 2 + 1 < 3 \div 4 \times 1$

or, $\dfrac{5}{2} + 1 < \dfrac{3}{4}$

or, $\dfrac{7}{2} \not< \dfrac{3}{4}$

4. (*)

× $\Rightarrow$ +	< $\Rightarrow$ −	+ $\Rightarrow$ ÷	> $\Rightarrow$ ×
− $\Rightarrow$ =	÷ $\Rightarrow$ >	= $\Rightarrow$ <	

Option (1)

$5 > 8 + 4 = 10 < 4 \times 8$

$\Rightarrow 5 \times 8 \div 4 < 10 - 4 + 8$

$\Rightarrow 5 \times 2 < 18 - 4 \Rightarrow 10 < 14$

Option (2)

$3 \times 4 > 2 - 9 + 3 < 3$

$\Rightarrow 3 + 4 \times 2 = 9 \div 3 - 3$

$\Rightarrow 3 + 8 \neq 3 - 3$

Option (3)

$5 \times 3 < 3 \div 8 + 4 \times 1$

$\Rightarrow 5 + 3 - 3 > 8 \div 4 + 1$

$\Rightarrow 8 - 3 > 2 + 1$

$\Rightarrow 5 > 3$

Option (4)

$3 \times 2 < 4 \div 16 > 2 \times 4$

$\Rightarrow 3 + 2 - 4 > 16 \times 2 \div 4$

$\Rightarrow 5 - 4 > \dfrac{16 \times 2}{4} \Rightarrow 1 \not> 8$

Both options (1) and (3) are correct.

5. (3)

+ $\Rightarrow$ ×	< $\Rightarrow$ ÷	÷ $\Rightarrow$ −
− $\Rightarrow$ +	× $\Rightarrow$ >	

Option (1)

$20 - 4 \div 4 + 8 < 2 \times 26$

$\Rightarrow 20 + 4 - 4 \times 8 \div 2 > 26$

$\Rightarrow 20 + 4 - 4 \times 4 > 26$

$\Rightarrow 24 - 16 \not> 26$

─┤ **SYMBOLS & NOTATIONS** ├─

Option (2)
$20 \times 8 + 15 < 5 \div 9 - 8$
$\Rightarrow 20 > 8 \times 15 \div 5 - 9 + 8$
$\Rightarrow 20 > 8 \times 3 - 9 + 8$
$\Rightarrow 20 > 24 - 9 + 8$
$\Rightarrow 20 \not> 23$

Option (3)
$20 < 2 + 10 \div 4 - 6 \times 100$
$\Rightarrow 20 \div 2 \times 10 - 4 + 6 > 100$
$\Rightarrow 10 \times 10 - 4 + 6 > 100$
$\Rightarrow 100 - 4 + 6 > 100$
$\Rightarrow 106 - 4 > 100$

Option (4)
$20 < 5 + 25 \div 10 - 2 \times 96$
$\Rightarrow 20 \div 5 \times 25 - 10 + 2 > 96$
$\Rightarrow 4 \times 25 - 10 + 2 > 96$
$\Rightarrow 100 - 10 + 2 > 96$
$\Rightarrow 102 - 10 \not> 96$

6. (1)

$= \Rightarrow \div$	$+ \Rightarrow -$	$\times \Rightarrow =$	$- \Rightarrow >$
$> \Rightarrow +$	$< \Rightarrow \times$	$\div \Rightarrow <$	

Option (1)
$4 < 2 + 5 + 8 \times 5$
$\Rightarrow 4 \times 2 - 5 - 8 = 5$
$\Rightarrow 8 - 5 - 8 \neq 5$

Option (2)
$4 = 2 + 5 > 8 \times 5$
$\Rightarrow 4 \div 2 - 5 + 8 = 5$
$\Rightarrow 2 - 5 + 8 = 5$

Option (3)
$4 < 2 > 5 + 8 \times 5$
$\Rightarrow 4 \times 2 + 5 - 8 = 5$
$\Rightarrow 8 + 5 - 8 = 5$

Option (4)
$4 > 2 < 5 + 8 - 5$
$\Rightarrow 4 + 2 \times 5 - 8 > 5$
$\Rightarrow 4 + 10 - 8 > 5$
$\Rightarrow 14 - 8 > 5$
$\Rightarrow 6 > 5$

7. (2)

$> \Rightarrow +$	$< \Rightarrow -$	$+ \Rightarrow \div$	$\wedge \Rightarrow \times$
$- \Rightarrow =$	$\times \Rightarrow >$	$= \Rightarrow <$	

Option (1)
$13 > 7 < 6 + 2 = 3 \wedge 4$
$\Rightarrow 13 + 7 - 6 \div 2 < 3 \times 4$
$\Rightarrow 13 + 7 - 3 < 12$
$\Rightarrow 20 - 3 \not< 12$

Option (2)
$9 > 5 > 4 - 18 + 9 > 16$
$\Rightarrow 9 + 5 + 4 = 18 \div 9 + 16$
$\Rightarrow 18 = 2 + 16$

Option (3)
$9 < 3 < 2 > 1 \times 8 \wedge 2$
$\Rightarrow 9 - 3 - 2 + 1 > 8 \times 2$
$\Rightarrow 5 \not> 16$

Option (4)
$28 + 4 \wedge 2 = 6 \wedge 4 + 2$
$\Rightarrow 28 \div 4 \times 2 < 6 \times 4 \div 2$
$\Rightarrow 7 \times 2 \not< 6 \times 2$

8. (4) $x \angle y + z$
$x \neq y > z$
$\Rightarrow x > y > z$
or $x < y > z$

Option (1)
$x \times y \mid z$
$\Rightarrow x = y < z$: Not true

Option (2)
$x - y \times z$
$\Rightarrow x \not< y = z$: Not true

Option (3)
$x \angle y \, \phi \, z$
$\Rightarrow x \neq y \not> z$: Not true

Option (4)
$x - y \angle z$
$\Rightarrow x \not< y \neq z$
$\Rightarrow x > y > z$
or, $x > y < z$
or, $x = y > z$
or, $x = y < z$
Option (4) may be true.

9. (4) $A \Rightarrow \not< \Rightarrow \geq$
$B \Rightarrow \neq \Rightarrow >, <$
$C \Rightarrow \not> \Rightarrow \leq$
$D \Rightarrow >$
$E \Rightarrow <$
$F \Rightarrow =$
$4Y \ F \ 3X \Rightarrow 4Y = 3X$
$3X \ F \ 6Z \Rightarrow 3X = 6Z$

$X = \dfrac{4Y}{3} = 2Z$

$Y = \dfrac{3}{4} X$

$\dfrac{4}{3} Y = 2Z$

$\Rightarrow Z = \dfrac{2}{3} Y$

Option (1)
$2Y \ D \ 3Z$
$\Rightarrow 2Y > 3Z$
$\Rightarrow 2Y > 3 \times \dfrac{2}{3} Y$
$\Rightarrow 2Y \not> 2Y$

Option (2)
$2Y \ C \ 3Z$
$\Rightarrow 2Y < 3Z$
$\Rightarrow 2Y < 3 \times \dfrac{2}{3} Y$
$\Rightarrow 2Y \not< 2Y$

Option (3)
$4Y \ B \ 5Z$
$\Rightarrow 4Y > 5Z$ or $4Y < 5Z$
$\Rightarrow 4Y > 5 \times \dfrac{2}{3} Y$

or $4Y < 5 \times \dfrac{2}{3} Y$

$\Rightarrow 4Y > \dfrac{10}{3} Y$ or $4Y \not< \dfrac{10}{3} Y$

Option (4)
$2Y \ F \ 3Z$
$\Rightarrow 2Y = 3Z$
$\Rightarrow 2Y = 3 \times \dfrac{2}{3} Y$
$\Rightarrow 2Y = 2Y$

10. (2)

$+ \Rightarrow \div$	$- \Rightarrow =$	$\times \Rightarrow +$
$\div \Rightarrow >$	$= \Rightarrow <$	$> \Rightarrow \times$
$< \Rightarrow -$		

Option (1)
$5 \div 2 \times 1 = 3 + 4 > 1$
$\Rightarrow 5 > 2 + 1 < 3 \div 4 \times 1$
$\Rightarrow 5 > 3 < \dfrac{3}{4}$

Option (2)
$5 > 2 \times 1 - 3 > 4 < 1$
$\Rightarrow 5 \times 2 + 1 = 3 \times 4 - 1$
$\Rightarrow 11 = 11$

11. (1)

$+ \Rightarrow -$	$\div \Rightarrow +$
$< \Rightarrow \times$	$> \Rightarrow \div$

$9 \div 7 < 8 > (4 > 2) + 5$
$\Rightarrow 9 + 7 \times 8 \div (4 \div 2) - 5$
$\Rightarrow 9 + 7 \times 8 \div 2 - 5$
$\Rightarrow 9 + 7 \times 4 - 5$
$\Rightarrow 9 + 28 - 5 = \boxed{32}$

12. (3)

$+ \Rightarrow \div$	$- \Rightarrow \times$	$\div \Rightarrow -$
$\times \Rightarrow +$	$< \Rightarrow <$	

Option (1)
$(10 + 2) \div 7 < (10 \div 7) + 2$
$\Rightarrow (10 \div 2) - 7 < (10 - 7) \div 2$
$\Rightarrow 5 - 7 < 3 \div 2$
$\Rightarrow -2 < \dfrac{3}{2}$

Option (2)
$(10 - 7) \times 2 < (10 \times 2) - 7$
$\Rightarrow (10 \times 7) + 2 < (10 + 2) \times 7$
$\Rightarrow 70 + 2 < 12 \times 7$
$\Rightarrow 72 < 84$

| SYMBOLS & NOTATIONS |

Option (3)
$(10 × 7) – 2 < (10 – 2) × 7$
$⇒ (10 + 7) × 2 < (10 × 2) + 7$
$⇒ 17 × 2 < 20 + 7$
$⇒ 34 ≮ 27$
Option (4)
$(10 ÷ 2) + 7 < (10 + 7) × 2$
$⇒ (10 – 2) ÷ 7 < (10 ÷ 7) + 2$
$⇒ \dfrac{8}{7} < \dfrac{10}{7} + 2$
$⇒ \dfrac{8}{7} < \dfrac{10+14}{7} ⇒ \dfrac{8}{7} < \dfrac{24}{7}$

TYPE-I (vii)

1. (2)

÷ ⇒ >	× ⇒ +
+ ⇒ ÷	– ⇒ =
> ⇒ ×	= ⇒ <
< ⇒ –	

Option (1)
$3 + 2 < 4 ÷ 6 > 3 × 2$
After conversion
$3 ÷ 2 – 4 > 6 × 3 + 2$
or, $\dfrac{3}{2} – 4 > 18 + 2$
or, $-\dfrac{5}{2} ≯ 20$
Option (2)
$3 × 2 < 4 ÷ 6 + 3 < 2$
After conversion
$3 + 2 – 4 > 6 ÷ 3 – 2$
or, $5 – 4 > 2 – 2$
or, $1 > 0$
Option (3)
$3 > 2 < 4 – 6 × 3 × 2$
After conversion
$3 × 2 – 4 = 6 + 3 + 2$
or, $6 – 4 ≠ 11$
Option (4)
$3 × 2 × 4 = 6 + 3 < 2$
After conversion
$3 + 2 + 4 < 6 ÷ 3 – 2$
or, $9 ≮ 0$

2. (2)

+ ⇒ ÷	– ⇒ =
× ⇒ +	÷ ⇒ >
= ⇒ <	> ⇒ ×
< ⇒ –	

Option (1)
$5 + 2 × 1 = 3 + 4 > 1$
$⇒ 5 ÷ 2 + 1 < 3 ÷ 4 × 1$
or, $\dfrac{5}{2} + 1 < \dfrac{3}{4} × 1$

or, $\dfrac{5+2}{2} < \dfrac{3}{4}$
or, $\dfrac{7}{2} < \dfrac{3}{4}$: Wrong
Option (2)
$5 > 2 × 1 – 3 > 4 < 1$
$⇒ 5 × 2 + 1 = 3 × 4 – 1$
or, $11 = 11$

3. (1) $2 \ ^- 5 ¬ 6 ® 2 ↗ 6$
$⇒ 2 × 5 – 6 + 2 = 6$
$⇒ 10 – 6 + 2 = 6$

4. (2) $8 + 8 ⇒ 8 × 8 + 8 = 72$
$5 + 5 ⇒ 5 × 5 + 5 = 30$
$7 + 7 ⇒ 7 × 7 + 7 = 56$
$6 + 6 ⇒ 6 × 6 + 6 = 42$

5. (1) $3 ÷ 5 ⇒ 3 × 5 = 1 \boxed{5}$
$4 ÷ 7 ⇒ 4 × 7 = 2 \boxed{8}$
$8 ÷ 7 ⇒ 8 × 7 = 5 \boxed{6}$
Therefore,
$9 ÷ 6 ⇒ 9 × 6 = 5 \boxed{4}$

6. (2) $8 × 2 = 16 ⇒ 61$
$8 × 5 = 40 ⇒ 04$
$8 × 10 = 80 ⇒ 08$

7. (2)
S   E   N   T
↓   ↓   ↓   ↓
+   ^   ×   –
Therefore,
T   E   N
↓   ↓   ↓
–   ^   ×

8. (3)
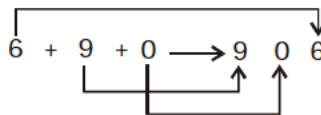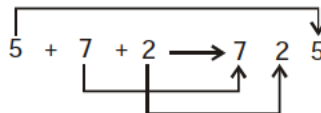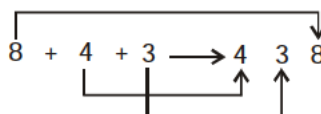
Therefore,

9. (2)
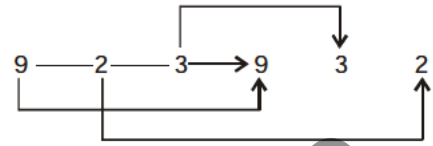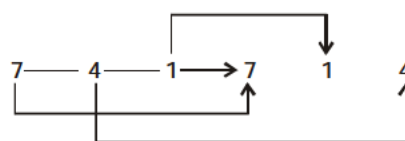
Therefore,
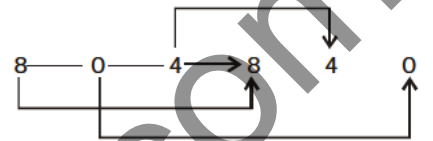
10. (4) $678 – 366 = 312$
$567 – 255 = 312$
Similarly,
$946 – 312 = 634$ second
11. (2) $1 + 4 = 9$
$⇒ 1 + (4 × 2) = 9$
$2 + 8 = 18$
$⇒ 2 + (8 × 2) = 18$
$3 + 6 = 15$
$⇒ 3 + (6 × 2) = 15$
Similarly,
$7 + 8 ⇒ 7 + (8 × 2)$
$⇒ 7 + 16 = \boxed{23}$
12. (2) $4 × 5 = 42$
$⇒ (4 + 2) × (5 + 2) = 42$
$⇒ 6 × 7 = 42$
$5 × 6 = 56$
$⇒ (5 + 2) × (6 + 2) = 56$
$⇒ 7 × 8 = 56$
$6 × 7 = 72$
$⇒ (6 + 2) × (7 + 2) = 72$
$⇒ 8 × 9 = 72$
Similarly,
$7 × 8$
$⇒ (7 + 2) × (8 + 2)$
$⇒ 9 × 10 = \boxed{90}$
13. (2) $58 × 12 = 4$
$⇒ (5 + 8) + (1 + 2) ⇒ 4$
$⇒ 13 + 3 ⇒ 4 ⇒ \sqrt{16} = 4$
$37 × 96 = 5$
$⇒ (3 + 7) + (9 + 6) ⇒ 5$
$⇒ 10 + 15 ⇒ 5 ⇒ \sqrt{25} = 5$
$11 × 20 = 2$
$⇒ (1 + 1) + (2 + 0) ⇒ 2$
$⇒ 2 + 2 ⇒ 2$
$⇒ \sqrt{4} = 2$
$42 × 12$
$⇒ (4 + 2) + (1 + 2)$
$6 + 3 = 9$
$⇒ \sqrt{9} = 3$

SYMBOLS & NOTATIONS

14. (4) $5 \times 8 = 28$
$\Rightarrow 5 \times 8 = 40$
$\Rightarrow 5 + 8 = 13; 13 - 1 = 12$
$\Rightarrow 40 - 12 = 28$
$3 \times 7 = 12$
$\Rightarrow 3 \times 7 = 21$
$\Rightarrow 3 + 7 = 10, 10 - 1 = 9$
$\Rightarrow 21 - 9 = 12$
$8 \times 6 = 35$
$\Rightarrow 8 \times 6 = 48$
$\Rightarrow 8 + 6 = 14; 14 - 1 = 13$
$\Rightarrow 48 - 13 = 35$
$13 \times 13 = ?$
$\Rightarrow 13 \times 13 = 169$
$\Rightarrow 13 + 13 = 26; 26 - 1 = 25$
$\Rightarrow 169 - 25 = 144$

15. (1) $2 \times 4 \times 6 = 4$
$\Rightarrow 6 - 4 = 2; \ 2 + 2 = 4$
Third Number – Second Number
+ First Number = Result
$9 \times 3 \times 7 = 13$
$\Rightarrow 7 - 3 + 9 = 16 - 3 = 13$
$4 \times 7 \times 6 = 3$
$\Rightarrow 6 - 7 + 4 = 3$
$\Rightarrow 10 - 7 = 3$
$9 \times 7 \times 8$
$\Rightarrow 8 - 7 + 9$
$\Rightarrow 17 - 7 = 10$

16. (1) $3 \times 5 \times 7 \times 2 = 24$
$\Rightarrow 3 \times 5 + 7 + 2 = 24$
$\Rightarrow 15 + 9 = 24$
$2 \times 4 \times 6 \times 8 = 22$
$\Rightarrow 2 \times 4 + 6 + 8 = 22$
$8 + 14 = 22$
$4 \times 4 \times 8 \times 9 = ?$
$\Rightarrow ? = 4 \times 4 + 8 + 9$
$\Rightarrow ? = 16 + 17 = 33$

17. (3) $7 \times 8 = 49$
$\Rightarrow 7 \times 8 - 7 = 56 - 7 = 49$
$4 \times 4 = 12$
$\Rightarrow 4 \times 4 - 4 = 16 - 4 = 12$
$6 \times 4 = 18$
$\Rightarrow 6 \times 4 - 6 = 24 - 6 = 18$
Similarly,
$9 \times 6 = ?$
$\Rightarrow ? = 9 \times 6 - 9$
$= 54 - 9 = 45$

18. (1) $5 \odot 3 = -7$
$\Rightarrow (5 \times 3) - (5 + 3)$
$\Rightarrow 15 - 8 = 7$
$7 \Rightarrow -7$
$3 \odot 7 = -1$
$\Rightarrow (3 \times 7) - (3 + 7)$
$\Rightarrow 21 - 10 = 11$
$11 \Rightarrow -11$
$7 \odot 11$
$\Rightarrow (7 \times 11) - (7 + 11)$
$\Rightarrow 77 - 18 = 59$
$59 \Rightarrow -59$

19. (2)
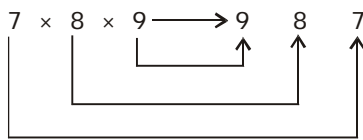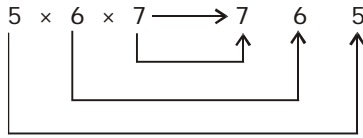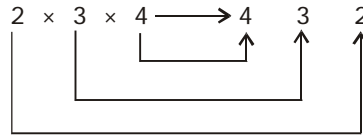
Similarly,
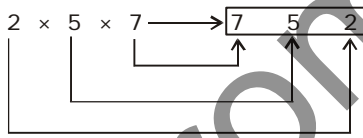
20. (2) $2 \times 16 = 8$
$\Rightarrow \dfrac{16}{2} = 8$
$8 \times 8 = 1$
$\Rightarrow \dfrac{8}{8} = 1$
$6 \times 12 = 2$
$\Rightarrow \dfrac{12}{6} = 2$
Therefore,
$12 \times 144 = ?$
$\Rightarrow ? = \dfrac{144}{12} = 12$

21. (2) $10 - 3 = 12$
$\Rightarrow 10 - 3 = 7$ and $7 + 5 = 12$
$12 - 4 = 13$
$\Rightarrow 12 - 4 = 8$ and $8 + 5 = 13$
$14 - 5 = 14$
$\Rightarrow 14 - 5 = 9$ and $9 + 5 = 14$
Similarly,
$16 - 6 = ?$
$\Rightarrow 16 - 6 = 10$ and $10 + 5 = 15$

22. (4) Box – 1 $\Rightarrow$ $\boxed{5}$

Box – 2 $\Rightarrow$ $\boxed{7}$

$5 - 1 = 4$ and $7 + 1 = 8$
$5 + 1 = 6$ and $7 - 1 = 6$

23. (4) $0 \Rightarrow a$
$1 \Rightarrow b$
$2 \Rightarrow c$
$3 \Rightarrow d$
$9 \Rightarrow j$
$dc \times f - (bf - d) \times d$
$\Rightarrow 32 \times 5 - (15 - 3) \times 3$
$\Rightarrow 160 - (12) \times 3$
$\Rightarrow 160 - 36 = 124 \Rightarrow bce$

24. (3) $29 \times 13 = 14$
$\Rightarrow 29 + 13 = 42$
$\Rightarrow \dfrac{42}{3} = 14$
$76 \times 26 = 34$
$\Rightarrow 76 + 26 = 34$
$\Rightarrow \dfrac{102}{3} = 34$
Therefore,
64×14
$\Rightarrow 64 + 14 = 78$
$\Rightarrow \dfrac{78}{3} = 26$

25. (2)
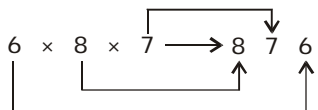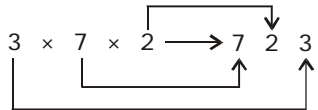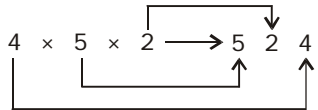
Therefore,
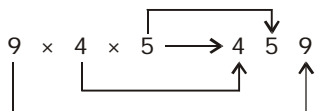
26. (1) $98 - 39 - 27 = 31$
$\Rightarrow (9 \times 8) - (3 \times 9 + 2 \times 7) = 31$
$\Rightarrow 72 - (27 + 14) = 31$
$\Rightarrow 72 - 41 = 31$
$87 - 38 - 34 = 20$
$\Rightarrow (8 \times 7) - (3 \times 8 + 3 \times 4) = 20$
$\Rightarrow 56 - (24 + 12) = 20$
$\Rightarrow 56 - 36 = 20$
$79 - 25 - 12 = ?$
$\Rightarrow ? = (7 \times 9) - (2 \times 5 + 1 \times 2)$
$\Rightarrow ? = 63 - (10 + 2)$
$\Rightarrow ? = 63 - 12 = 51$

─┤ SYMBOLS & NOTATIONS ├─

27. (4)

$$5 \quad 3 \quad - \quad 3 \quad 4$$
$$\downarrow \qquad \times \qquad \downarrow$$
$$5 \quad 3 \quad - \quad 3 \quad 4$$

$$6 \quad 5 \quad - \quad 4 \quad 6$$
$$\downarrow \qquad \times \qquad \downarrow$$
$$6 \quad 4 \quad \quad 5 \quad 6$$

Therefore,

$$7 \quad 5 \quad - \quad 2 \quad 4$$
$$\downarrow \qquad \times \qquad \downarrow$$
$$7 \quad 2 \quad \quad 5 \quad 4$$

28. (4)

$$6 \times 2 \times 9 \longrightarrow 2 \quad 6 \quad 9$$

$$8 \times 7 \times 1 \longrightarrow 7 \quad 8 \quad 1$$

Therefore,

$$4 \times 1 \times 3 \longrightarrow 1 \quad 4 \quad 3$$

29. (1)

$$3 \times 4 \times 5 \longrightarrow 4 \quad 3 \quad 5$$

$$4 \times 3 \times 2 \longrightarrow 3 \quad 4 \quad 2$$

Therefore,

$$2 \times 3 \times 4 \longrightarrow 3 \quad 2 \quad 4$$

30. (2) $17 + 17 \Rightarrow 2895$
$\Rightarrow 17 \times 17 = 289$
$\Rightarrow 289 \Rightarrow 2895$
$18 + 18 \Rightarrow 3245$
$\Rightarrow 18 \times 18 = 324$
$\Rightarrow 324 \Rightarrow 3245$
$19 + 19 \Rightarrow 3615$
$\Rightarrow 19 \times 19 = 361$
$\Rightarrow 361 \Rightarrow 3615$
Similarly,
$23 + 23 = ?$
$\Rightarrow ? = 23 \times 23 = 529$
$\Rightarrow ? = 529 \Rightarrow 5295$

31. (2) $24 \times 2 = 48 \Rightarrow 84$
$32 \times 3 = 96 \Rightarrow 69$
$13 \times 3 = 39 \Rightarrow 93$

32. (3) $4 + 3 = 25$
$\Rightarrow (4)^2 + (3)^2 = 25$
$\Rightarrow 16 + 9 = 25$
$8 + 4 = 80$
$\Rightarrow (8)^2 + (4)^2 = 80$
$\Rightarrow 64 + 16 = 80$
Therefore,
$3 + 2$
$\Rightarrow (3)^2 + (2)^2$
$\Rightarrow 9 + 4 = 13$

33. (3) $12 \times 16 = 188$
$\Rightarrow 12 \times 16 = 192$
and, $192 - 4 = 188$
$14 \times 18 = 248$
$\Rightarrow 14 \times 18 = 252$
and, $252 - 4 = 248$
Therefore,
$16 \times 20 = 320$
and, $320 - 4 = 316$

34. (4) $64 + 7 = 460$
$\Rightarrow 64 \times 7 + 12 = 460$
$25 + 8 = 212$
$\Rightarrow 25 \times 8 + 12 = 212$
Therefore,
$43 + 8 = ?$
$\Rightarrow 43 \times 8 + 12$
$= 344 + 12 = 356$

35. (3)

$$6 \times 9 \times 3 \Rightarrow 9 \quad 6 \quad 3$$

$$4 \times 8 \times 5 \Rightarrow 8 \quad 4 \quad 5$$

Therefore,

$$9 \times 4 \times 7 \Rightarrow 4 \quad 9 \quad 7$$

36. (2) (i) $4 \times 3 = 14 \Rightarrow (4 + 3) \times 2$
$= 7 \times 2 = 14$
(ii) $5 \times 4 = 18 \Rightarrow (5 + 4) \times 2$
$= 9 \times 2 = 18$
(iii) $6 \times 5 = 22 \Rightarrow (6 + 5) \times 2$
$= 11 \times 2 = 22$
Similarly,
(iv) $7 \times 6 \Rightarrow (7 + 6) \times 2$
$= 13 \times 2 = 26$

37. (2)

$$8 \times 5 \times 0 \longrightarrow 8 \quad 0 \quad 5$$

$$7 \times 4 \times 6 \longrightarrow 7 \quad 6 \quad 4$$

Therefore,

$$6 \times 8 \times 9 \longrightarrow 6 \quad 9 \quad 8$$

38. (1) $34 \times 34 \times 34 = 39304$
$27 \times 27 \times 27 = 19683$
$13 \times 13 \times 13 = 2197$

39. (4)

$$1 \times 3 \times 5 = 1 \quad 9 \quad 25$$
$\times 1$
$\times 3$
$\times 5$

$$7 \times 9 \times 11 \longrightarrow 49 \quad 81 \quad 121$$
$\times 7$
$\times 9$
$\times 11$

Therefore,

$$19 \times 21 \times 23 \longrightarrow 361 \quad 441 \quad 529$$
$\times 19$
$\times 21$
$\times 23$

40. (2) $2 + 4 + 6 = 48$
$\Rightarrow 2 \times 4 \times 6 = 48$
$3 + 2 + 8 = 48$
$\Rightarrow 3 \times 2 \times 8 = 48$
$2 + 5 + 7 = ?$
$\Rightarrow ? = 2 \times 5 \times 7 = 70$

41. (2)

$$1 \times 2 \times 3 \longrightarrow 2 \quad 3 \quad 1$$

$$3 \times 4 \times 5 \longrightarrow 4 \quad 5 \quad 3$$

SYMBOLS & NOTATIONS

Therefore,

$$5 \times 6 \times 7 \longrightarrow 6 \ 7 \ 5$$

42. (4)

$$5 \times 4 \times 0 \longrightarrow 4 \ 0 \ 5$$

$$3 \times 2 \times 8 \longrightarrow 2 \ 8 \ 3$$

Therefore,

$$1 \times 7 \times 6 \longrightarrow 7 \ 6 \ 1$$
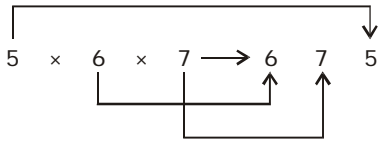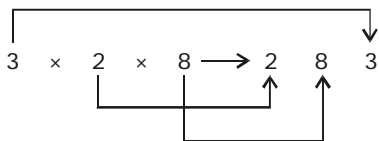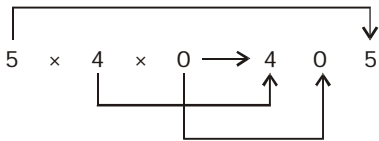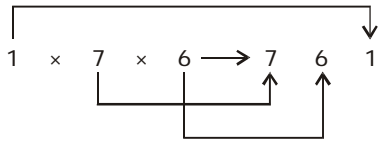
43. (1) 56 × 11 = 9
$\Rightarrow$ 56 – 11 = 9
$\Rightarrow$ 45 $\Rightarrow$ 4 + 5 = 9
37 × 13 = 6
$\Rightarrow$ 37 – 13 = 6
$\Rightarrow$ 24 $\Rightarrow$ 2 + 4 = 6
42 × 12 = 3
$\Rightarrow$ 42 – 12 = 3
$\Rightarrow$ 30 $\Rightarrow$ 3 + 0 = 3
Therefore,
87 × 77
$\Rightarrow$ 87 – 77 = 10 $\Rightarrow$ 1 + 0 = 1

44. (4)

$$4 \times 5 \times 8 \longrightarrow 5 \ 8 \ 4$$

$$7 \times 3 \times 9 \longrightarrow 3 \ 9 \ 7$$

Therefore,

$$9 \times 7 \times 3 \longrightarrow 7 \ 3 \ 9$$
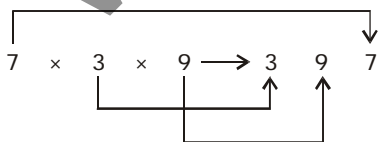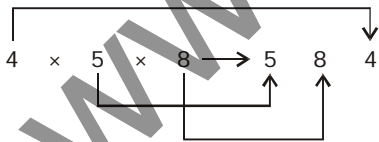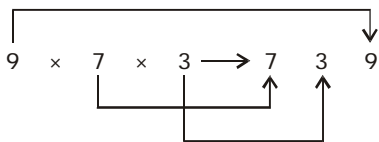
45. (1) 879 = 8
$\Rightarrow$ 7 + 9 – 8 = 8
625 = 1
$\Rightarrow$ 2 + 5 – 6 = 1
586 = 9
$\Rightarrow$ 8 + 6 – 5 = 9
785 = ?
$\Rightarrow$ 8 + 5 – 7 = 6

46. (1) 84 + 96 = 4842

$\Rightarrow \dfrac{84}{2} ; \dfrac{96}{2} \Rightarrow 42 ; 48 \Rightarrow 4842$

Therefore,
36 + 78

$\Rightarrow \dfrac{36}{2} ; \dfrac{78}{2}$

$\Rightarrow$ 18 ; 39
$\Rightarrow$ 3918

47. (3)

$$4 \quad 6 \quad 2 \longrightarrow 5 \ 5 \ 1$$
+1, –1, –1

$$3 \quad 9 \quad 8 \longrightarrow 4 \ 8 \ 7$$
+1, –1, –1

Therefore,

$$8 \quad 5 \quad 6 \longrightarrow 9 \ 4 \ 5$$
+1, –1, –1

48. (2)

$$7 \times 5 \times 6 \longrightarrow 5 \ 7 \ 6$$

$$4 \times 2 \times 5 \longrightarrow 2 \ 4 \ 5$$

$$8 \times 2 \times 5 \longrightarrow 2 \ 8 \ 5$$

49. (2)

$$7 \times 4 \times 9 \longrightarrow 4 \ 7 \ 9$$

$$9 \times 5 \times 2 \longrightarrow 5 \ 9 \ 2$$

$$6 \times 9 \times 5 \longrightarrow 9 \ 6 \ 5$$

Therefore,

$$8 \times 6 \times 2 \longrightarrow 6 \ 8 \ 2$$

50. (2)

$$1 \ 5 \times 2 \ 6 \longrightarrow 6 \ 5 \ 1 \ 2$$

$$2 \ 9 \times 3 \ 6 \longrightarrow 6 \ 9 \ 2 \ 3$$

$$4 \ 6 \times 5 \ 4 \longrightarrow 4 \ 6 \ 4 \ 5$$
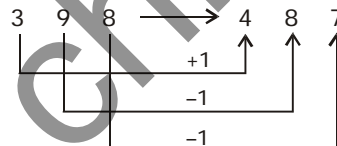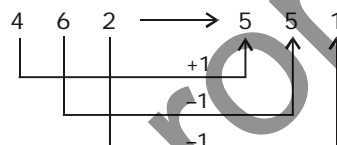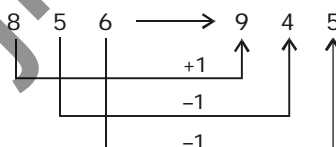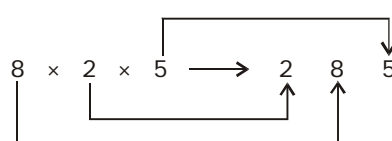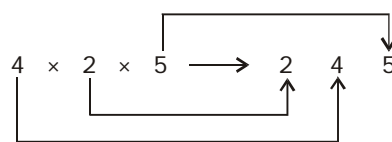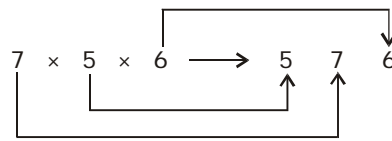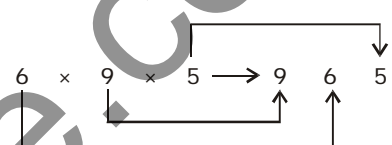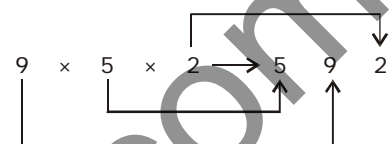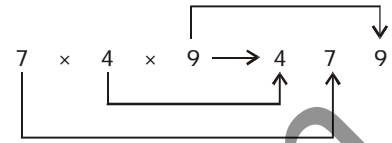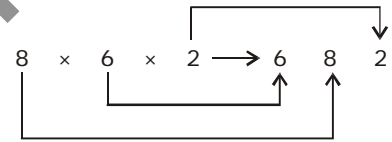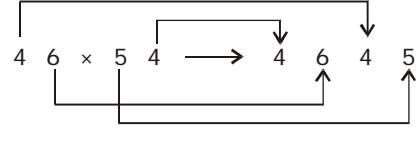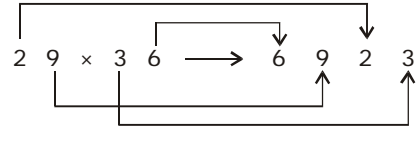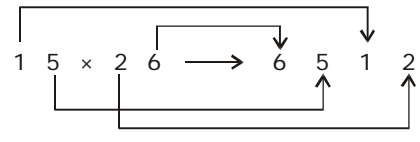
51. (3) 23 × 16 = 184

$\Rightarrow \dfrac{23 \times 16}{2} = 184$

37 × 10 = 185

$\Rightarrow \dfrac{37 \times 10}{2} = 185$

Therefore,
? = 85 × 12

$\Rightarrow \dfrac{85 \times 12}{2} = \boxed{510}$

52. (4) 5 × 4 × 3 = 70
$\Rightarrow$ 5 × 4 × 3 + 10 = 70
6 × 5 × 4 = 140
$\Rightarrow$ 6 × 5 × 4 + 20 = 140

SYMBOLS & NOTATIONS

Therefore,
? = 7 × 6 × 5 + 30
⇒ ? = 210 + 30 = 240
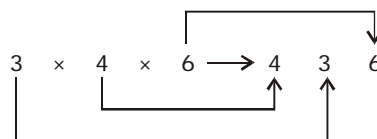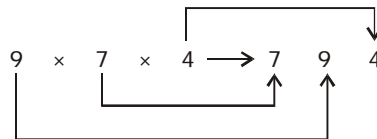
53. (2)

54. (1)
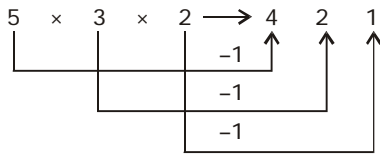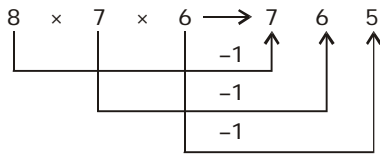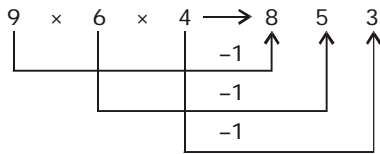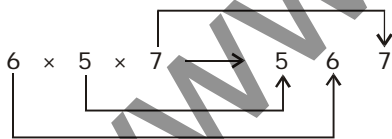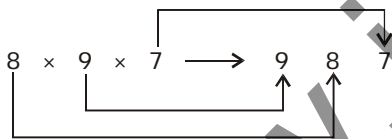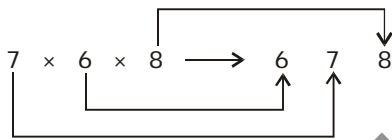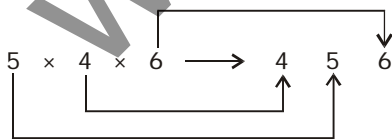
55. (3) $\dfrac{6 \times 4}{2} = 12$
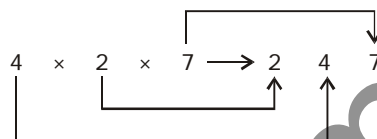
$\dfrac{4 \times 12}{2} = 24$

$\dfrac{6 \times 9}{2} = 27$

56. (2)

Therefore,

57. (2)
8 + 5 – 5 = 45
⇒ 8 × 5 + 5 = 45
12 + 6 – 5 = 77
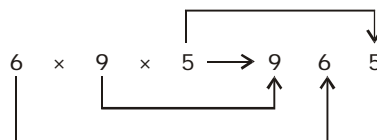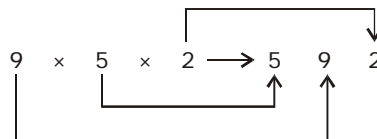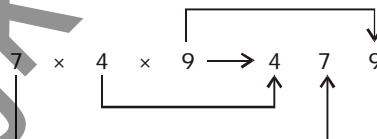⇒ 12 × 6 + 5 = 77
14 + 5 – 10
⇒ 14 × 5 + 10
⇒ 70 + 10 = 80

58. (2)

Therefore,
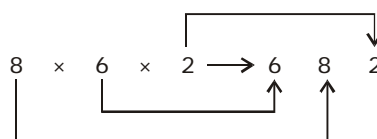
TYPE-II

1. (1) 6 ÷ 3 + 4 > 45
→ 2 + 4 > 45

2. (*) **Option (2)**
24 = 4 × 5 + 4
⇒ 24 = 20 + 4
Option (4)
24 = 4 + 5 × 4
⇒ 24 = 4 + 20
Both options (2) and (4) are correct.

3. (1) 25 × 2 – 6 = 4 × 11 + 0
⇒ 50 – 6 = 44 + 0 ⇒ 44 = 44

4. (1) 8 × 5 = 27 – 3 + 16
⇒ 40 = 24 + 16
⇒ 40 = 40

5. (1) 96 ÷ 6 = 8 × 2
⇒ 16 = 16

6. (4) 17 * 3 * 6 * 45
⇒17 × 3 – 6 = 45
⇒ 51 – 6 = 45
⇒ 45 = 45

7. (1) 3 * 2 * 1 * 7
⇒ 3 × 2 + 1 = 7
⇒ 6 + 1 = 7
⇒ 7 = 7

8. (4) 12 * 3 * 4 * 8 * 0
or, 4 + 4 – 8 = 0
or, 8 – 8 = 0

9. (3) 7 * 4 * 8 * 2
⇒ 28 – 4 = 24

10. (3) 5 * 0 * 3 * 5
or, 5 + 15 = 20

11. (3) 23 + 3 = 26 and 26 + 1 = 27

12. (1) 65 – 40 + 11 = 25 + 11 = 36

13. (4) 31 – 1 ÷ 2 + 1 = 16
⇒ 30 ÷ 2 + 1 =16
⇒ 16 = 16

14. (4) 20 ÷ 5 + 8 × 2 – 17
or, 4 + 16 – 17 = 3

15. (2) 16 ÷ 4 + 5 = 9 × 1
⇒ 4 + 5 = 9

16. (3) 7 × 5 + 5 = 4 × 10
⇒ 40 = 40

17. (4) 34 + 12 = 46; 46 ÷ 2 = 23
28 + 76 = 104; 104 ÷ 2 = 52
97 + 39 = 136; 136 ÷ 2 = 68
Therefore,
37 + 73 = 110; $\dfrac{110}{2} = 55$

18. (4) 8 – 8 + 1 = 11 ÷ 11
⇒ 1 = 1

─────┤ **SYMBOLS & NOTATIONS** ├─────

19. (3) $16 \div 4 \times 5 = 14 + 6$
$\Rightarrow 4 \times 5 = 20$

20. (2) $7 + 7 - 2 \times 1 = 12$
$\Rightarrow 7 + 7 - 2 = 12$

21. (4) $9 + 7 = 16;$ $9 - 7 = 2$
$16 \times 2 = 32$
$13 + 7 = 20;$ $13 - 7 = 6$
$20 \times 6 = 120$
$17 + 9 = 26;$ $17 - 9 = 8$
$26 \times 8 = 208$
$19 + 11 = 30;$ $19 - 11 = 8$
$30 \times 8 = 240$

22. (4) $8 \times 5 - 9 = 31$
$\Rightarrow 40 - 9 = 31$

23. (2) $4 \times 6 - 6 + 2 = 20$
$\Rightarrow 24 - 6 + 2 = 20$
$\Rightarrow 26 - 6 = 20$

24. (4) $8 \quad 5 \quad 2 \quad 72 \quad 4$
$\Rightarrow 8 + 5 \times 2 = 72 \div 4$
$\Rightarrow 8 + 10 = 18$

25. (2) $15 \times 3 - 5 = 20 \times 2$
$\Rightarrow 45 - 5 = 40$

26. (2) $2 \times 3 - 2 + 4 = 8$
$\Rightarrow 6 - 2 + 4 = 8$

27. (4) $16 - 2 - 24 \div 3 = 6$
$\Rightarrow 16 - 2 - 8 = 6$
$\Rightarrow 16 - 10 = 6$

28. (4) $16 - 4 \times 3 \div 4 = 13$
$\Rightarrow 16 - 3 = 13$

29. (3) $6 * 15 * 10 * 3 * 12$
$\Rightarrow 6 \times 15 \div 10 + 3 = 12$
$\Rightarrow 9 + 3 = 12$

30. (2) $18 \times 6 \div 3 - 12 = 24$
$\Rightarrow 18 \times 2 - 12 = 24$
$\Rightarrow 36 - 12 = 24$

31. (2) $16 \times 4 > 64 \div 4 \Rightarrow 64 > 16$

32. (1) $28 \div 4 + 9 = 16$
$\Rightarrow 7 + 9 = 16$

33. (4) $16 \times 6 \div 4 = 24$
$\dfrac{96}{4} = 24$

34. (2) $16 - 8 \div 1 = 8$
$\Rightarrow 16 - 8 = 8$

35. (1) $9 \div 3 \times 3 - 3 = 6$
$\Rightarrow 3 \times 3 - 3 = 6$
$\Rightarrow 9 - 3 = 6$

36. (2) $8 * 6 * 96 * 2 = 0$
$\Rightarrow 8 \times 6 - 96 \div 2 = 0$
$\Rightarrow 48 - 48 = 0$

37. (2) $\dfrac{264}{2} = 132$
$1 + 3 + 2 = 6$

$\dfrac{870}{3} = 290$
$2 + 9 + 0 = 11$
Similarly,
$\dfrac{735}{5} = 147$
$1 + 4 + 7 = 12$

38. (1) $24 * 16 * 8 * 32$
$\Rightarrow 24 + 16 - 8 = 32$
$\Rightarrow 40 - 8 = 32$

39. (2) $15 * 24 * 3 * 6 * 17$
$\Rightarrow 15 + 24 \div 3 - 6 = 17$
$\Rightarrow 15 + 8 - 6 = 17$

40. (1) $5 * 5 * 5 * 3 * 10$
$\Rightarrow 5 \times 5 + 5 = 3 \times 10$
$\Rightarrow 30 = 30$

41. (2) $21 * 7 * 6 * 9$
$\Rightarrow 21 \div 7 + 6 = 9$
$\Rightarrow 3 + 6 = 9$

42. (4) $6 * 4 * 12 * 12$
$\Rightarrow 6 \times 4 - 12 = 12$
$\Rightarrow 24 - 12 = 12$

43. (3) $8 * 8 * 1 * 7 * 8$
$\Rightarrow 8 \div 8 \times 1 + 7 = 8$
$\Rightarrow 1 \times 1 + 7 = 8$

44. (2) $13 * 3 * 4 * 3 = 4$
$\Rightarrow 13 - 3 \times 4 + 3 = 4$
$\Rightarrow 13 - 12 + 3 = 4$
$\Rightarrow 1 + 3 = 4$

45. (3) $2 * 4 * 3 * 4 * 9$
$\Rightarrow 2 \times 4 - 3 + 4 = 9$
$\Rightarrow 8 - 3 + 4 = 9$
$\Rightarrow 5 + 4 = 9$

46. (1) $5 * 6 = 35$
$\Rightarrow 6 \times 5 + 5 = 35$
$8 * 4 = 28$
$4 \times 5 + 8 = 28$
Similarly,
$6 * 8$
$8 \times 5 + 6 = 46$

47. (3) $12 * 3 * 4 = 6 * 8 * 8$
$\Rightarrow 12 \times 3 + 4 = 6 \times 8 - 8$
$\Rightarrow 36 + 4 = 48 - 8$
$\Rightarrow 40 = 40$

48. (1) $5 * 9 * 3 * 6 * 8$
$\Rightarrow 5 \times 9 + 3 = 6 \times 8$
$\Rightarrow 45 + 3 = 48$

49. (2) $33 * 11 * 3 * 6 = 115$
$\Rightarrow 33 \times 11 \div 3 - 6 = 115$
$\Rightarrow \left(\dfrac{33 \times 11}{3}\right) - 6 = 115$
$\Rightarrow 11 \times 11 - 6 = 115$
$\Rightarrow 121 - 6 = 115$

50. (2) $13 * 12 * 5 * 4$
$\Rightarrow 13 = 12 + 5 - 4$
$\Rightarrow 13 = 17 - 4$

51. (1) $73 * 17 = 45$
$\Rightarrow \dfrac{73 + 17}{2} = \dfrac{90}{2} = 45$
$68 * 40 = 54$
$\Rightarrow \dfrac{68 + 40}{2} = \dfrac{108}{2} = 54$
Similarly,
$83 * 15 = ?$
$\dfrac{83 + 15}{2} = \dfrac{98}{2} = \boxed{49}$

52. (*) **Option (1)**
$(\sqrt{121} - 9) + 5 \times 4 = 1$
$\Rightarrow (11 - 9) + 5 \times 4 = 1$
$\Rightarrow 2 + 5 \times 4 = 1$
$\Rightarrow 2 + 20 \neq 1$

Option (2)
$(\sqrt{121} + 9) \div 5 \times 4 = 1$
$\Rightarrow (11 + 9) \div 5 \times 4 = 1$
$\Rightarrow \dfrac{20}{5} \times 4 \neq 1$

Option (3)
$(\sqrt{121} = 9) + 5 \times 4 \div 1$
$\Rightarrow 11 \neq 9 + 20$
Option (4)
$(\sqrt{121} - 9) \times 5 + 4 = 1$
$\Rightarrow (11 - 9) \times 5 + 4 = 1$
$\Rightarrow 2 \times 5 + 4 \neq 1$

53. (2) $45 * 3 * 6 * 2 * 16$
$\Rightarrow (45 + 3) \div 6 \times 2 = 16$
$\Rightarrow 48 \div 6 \times 2 = 16$
$\Rightarrow 8 \times 2 = 16$

54. (3) $8 * 5 * 10 * 2 * 25$
$\Rightarrow 8 \times 5 + 10 = 2 \times 25$
$\Rightarrow 40 + 10 = 50$

55. (1) $5 * 3 * 3 * 5 * 0$
$\Rightarrow 5 \times 3 \div 3 - 5 = 0$
$\Rightarrow 5 - 5 = 0$

56. (*)

$+ \Rightarrow -$	$- \Rightarrow \times$
$\times \Rightarrow \div$	$\div \Rightarrow +$

Option (1)
$42 * 4 * 12 * 20 * 9$
$\Rightarrow 42 - 4 \div 12 \times 20 + 9$
After changing the signs
$42 \times 4 + 12 \div 20 - 9$

| SYMBOLS & NOTATIONS |

$\Rightarrow 42 \times 4 + \dfrac{12}{20} - 9$

$\Rightarrow 168 + \dfrac{3}{5} - 9 \neq 0$

Option (2)
42 * 4 * 12 * 20 * 9
$\Rightarrow 42 \div 4 + 12 - 20 \times 9$
After changing the signs
42 + 4 – 12 × 20 ÷ 9

$\Rightarrow 42 + 4 - \dfrac{12 \times 20}{9}$

$\Rightarrow 42 + 4 - \dfrac{80}{3}$

$\Rightarrow 46 - \dfrac{80}{3} \neq 0$

Option (3)
42 * 4 * 12 * 20 * 9
$\Rightarrow 42 + 4 - 12 \div 20 \times 9$
After changing the signs
$\Rightarrow 42 - 4 \times 12 + 20 \div 9$

$\Rightarrow 42 - 4 \times 12 + \dfrac{20}{9}$

$\Rightarrow 42 - 48 + \dfrac{20}{9} \neq 0$

Option (4)
42 * 4 * 12 * 20 * 9
$\Rightarrow 42 \times 4 - 12 \div 20 + 9$
After changing the signs
$42 \div 4 \times 12 + 20 - 9$

$\Rightarrow \dfrac{21}{2} \times 12 + 20 - 9$

$\Rightarrow 21 \times 6 + 20 - 9 \neq 0$

57. (2) (16 + 18) * (21 – 11) * 32 * 8
$\Rightarrow 34 - 10 = 32 - 8$
= 24 = 24

58. (4)

* ⇒ ×	@ ⇒ ÷
? ⇒ +	= ⇒ –

10 * 10 = 5 * 10 ? 50 @ 10
$\Rightarrow 10 \times 10 - 5 \times 10 + 50 \div 10$
$\Rightarrow 10 \times 10 - 5 \times 10 + 5$
$\Rightarrow 100 - 50 + 5 = \boxed{55}$

59. (4) 37 * 14 = 17

$\Rightarrow \dfrac{37 + 14}{3} = 17$

$\Rightarrow \dfrac{51}{3} = 17$

69 * 33 = 34

$\Rightarrow \dfrac{69 + 33}{3} = 34$

$\Rightarrow \dfrac{102}{3} = 34$

91 * 125 = 72

$\Rightarrow \dfrac{91 + 125}{3} = 72$

$\Rightarrow \dfrac{216}{3} = 72$

Therefore,
28 * 56

$\Rightarrow \dfrac{28 + 56}{3} \Rightarrow \dfrac{84}{3} = 28$

60. (2) 5 * 3 = 19
$\Rightarrow (5 \times 2) + (3 \times 3) = 19$
[2 = 5 – 3]
$\Rightarrow 10 + 9 = 19$
8 * 5 = 49
$\Rightarrow (8 \times 3) + (5 \times 5) = 49$
[3 = 8 – 5]
$\Rightarrow 24 + 25 = 49$
Therefore,
6 * 4
$\Rightarrow (6 \times 2) + (4 \times 4)$
[2 = 6 – 4]
$\Rightarrow 12 + 16 = 28$

61. (4)

Therefore,

62. (1) $4 * 2 = 3 \Rightarrow \dfrac{4}{2} + 1 = 3$

$8 * 4 = 3 \Rightarrow \dfrac{8}{4} + 1 = 3$

Therefore,

$21 * 7 = ? \Rightarrow \dfrac{21}{7} + 1 = 4$

63. (2) 3 * 4 = 10
$\Rightarrow 3 \times 2 + 4 = 10$
5 * 8
$\Rightarrow 5 \times 2 + 8 = 18$
7 * 7
$\Rightarrow 7 \times 2 + 7 = 21$

64. (3) 48 * 4 * 6 * 3 * 30
$\Rightarrow 48 \div 4 + 6 \times 3 = 30$
$\Rightarrow 12 + 18 = 30$

65. (1) 1 * 2 = 1
$\Rightarrow (1 + 2) - (1 \times 2)$
$\Rightarrow 3 - 2 = 1$
2 * 3 = –1
$\Rightarrow (2 + 3) - (2 \times 3) = -1$
$\Rightarrow 5 - 6 = -1$
3 * 4 = – 5
$\Rightarrow (3 + 4) - (3 \times 4) = -5$
$\Rightarrow 7 - 12 = -5$
Therefore,
7 * 9
$\Rightarrow (7 + 9) - (7 \times 9)$
$\Rightarrow 16 - 63 = -47$

66. (1)

3 * 2	* 8 * 4
↓	↓
3 × 2	8 × 4
↓	↓
6	32

2 * 4	* 4 * 4
↓	↓
2 × 4	4 × 4
↓	↓
8	16

Therefore,

3 * 3	* 5 * 1
↓	↓
3 × 3	5 × 1
↓	↓
9	5

67. (2)

Therefore,

68. (2) 13 * 45 = 29

$\Rightarrow \dfrac{13 + 45}{2} = 29$

24 * 58 = 41

$\Rightarrow \dfrac{24 + 58}{2} = 41$
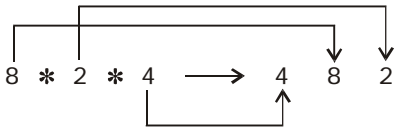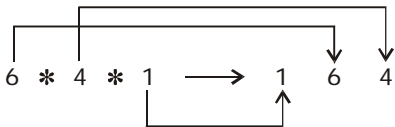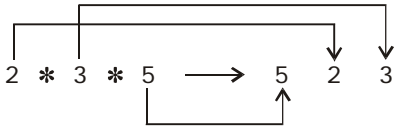
74 * 32 = 53

$\Rightarrow \dfrac{74 + 32}{2} = 53$
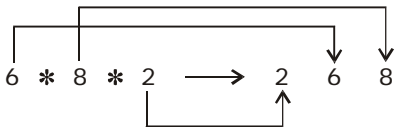
| SYMBOLS & NOTATIONS |

Therefore,

97 * 47

$\Rightarrow$ 97 + 47 = 144

$\Rightarrow \dfrac{144}{2}$ = 72

69. (2)

70. (3) 9 * 8 = 63

$\Rightarrow$ 9 × 7 = 63

7 * 8 = 49

$\Rightarrow$ 7 × 7 = 49

5 * 6 = 25

$\Rightarrow$ 5 × 5 = 25

11 * 7 = ?

$\Rightarrow$ 11 × 6 = $\boxed{66}$

TYPE-III

1. (4) (12 + 6) × 18 = 36

$\Rightarrow$ (18 ÷ 6) × 12 = 36

$\Rightarrow$ 3 × 12 = 36

2. (2) 5 = 15 ÷ 3

3. (3) (12 ÷ 6) + 3 × 7 = 42

$\Rightarrow$ (12 + 6) ÷ 3 × 7 = 42

$\Rightarrow$ 18 ÷ 3 × 7 = 42

4. (3) 35 + 7 × 5 ÷ 5 – 6 = 24

$\Rightarrow$ 35 ÷ 7 × 5 + 5 – 6 = 24

$\Rightarrow$ 5 × 5 + 5 – 6 = 24

$\Rightarrow$ 25 + 5 – 6 = 24

5. (3) 24 ÷ 6 × 3 + 3 – 1 = 14

$\Rightarrow$ 4 × 3 + 3 – 1 =14

$\Rightarrow$ 12 + 3 – 1 = 14

$\Rightarrow$ 15 –1 = 14

6. (3) (5 + 2) × 2 – 10 = 16

$\Rightarrow$ (5 – 2) × 2 + 10 = 16

$\Rightarrow$ 3 × 2 + 10 = 16

$\Rightarrow$ 6 + 10 = 16

7. (3) 30 ÷ 6 – 4 + 2 × 3 = 7

$\Rightarrow$ 5 – 4 + 6 = 7

8. (1) 5+ 6 × 3 – 12 ÷ 2 = 17

$\Rightarrow$ 5 + 18 – 6 = 17

$\Rightarrow$ 23 – 6 = 17

9. (4) (7 + 2) × 3 × 4 – 1 = 20

$\Rightarrow$ (7 × 2) + 3 + 4 – 1 = 20

$\Rightarrow$ 14 + 3 + 4 – 1 = 20

10. (1) (16 – 4) × 6 ÷ 2 + 8 = 30

$\Rightarrow$ (16 ÷ 4) × 6 – 2 + 8 = 30

$\Rightarrow$ 4 × 6 – 2 + 8 = 30

$\Rightarrow$ 24 – 2 + 8 = 30

$\Rightarrow$ 32 – 2 = 30

11. (3) 6 × 4 + 2 = 16

$\Rightarrow$ 4 + 6 × 2 = 16

$\Rightarrow$ 4 + 12 = 16

12. (4) (20 – 4) × 4 + 16 = 36

$\Rightarrow$ (20 ÷ 4) × 4 + 16 = 36

$\Rightarrow$ 5 × 4 + 16 = 36

13. (1) 2 × 3 + 6 – 12 ÷ 4 = 17

$\Rightarrow$ 2 + 3 × 6 – 12 ÷ 4 = 17

$\Rightarrow$ 2 + 18 – 3 = 17

14. (3) 10 + 10 ÷ 10 – 10 × 10 = 10

$\Rightarrow$ 10 × 10 ÷ 10 – 10 + 10 = 10

$\Rightarrow$ 10 – 10 + 10 = 10

15. (4) (8 – 8) + 8 × 32 = 64

$\Rightarrow$ (8 + 8) ÷ 8 × 32 = 64

$\Rightarrow$ 16 ÷ 8 × 32 = 64

$\Rightarrow$ 2 × 32 = 64

16. (4) 8 × 20 ÷ 3 + 9 – 5 = 38

$\Rightarrow$ 8 × 20 ÷ 5 + 9 – 3 = 38

$\Rightarrow$ 8 × 4 + 9 – 3 = 38

$\Rightarrow$ 32 + 9 – 3 = 38

17. (2) (18 ÷ 9) + 3 × 5 = 45

$\Rightarrow$ (18 + 9) ÷ 3 × 5 = 45

$\Rightarrow$ 27 ÷ 3 × 5 = 45

18. (3) 8 × 6 + 2 = 22

$\Rightarrow$ 6 + 8 × 2 = 22

$\Rightarrow$ 6 + 16 = 22

19. (3) Given expression

64 – 8 × 9 × 8 = 64

After interchange

(64 + 8) ÷ 9 × 8 = 64

72 ÷ 9 × 8 = 64

$\Rightarrow$ 8 × 8 = 64

20. (2) **Option (1)**

(30 ÷ 5) × 10 = 24

$\Rightarrow$ (30 × 10) ÷ 5 = 24

$\Rightarrow$ 300 ÷ 5 = 24

$\Rightarrow$ 60 ≠ 24

Option (2)

(30 × 10) ÷ 5 = 60

$\Rightarrow$ (30 ÷ 5) × 10 = 60

$\Rightarrow$ 6 × 10 = 60

Option (3)

(30 ÷ 10) × 5 = 18

$\Rightarrow$ (30 × 5) ÷ 10 = 18

$\Rightarrow$ 150 ÷ 10 = 18

$\Rightarrow$ 15 ≠ 18

Option (4)

(10 ÷ 30) × 5 = 70

$\Rightarrow$ (5 × 30) ÷ 10 = 70

$\Rightarrow$ 150 ÷ 10 = 70

$\Rightarrow$ 15 ≠ 70

21. (3) (6 + 3) + (4 × 7) = 29

$\Rightarrow$ (6 × 3) + (4 + 7) = 29

$\Rightarrow$ 18 + 11 = 29

22. (1) 28 – 7 + 2 × 2 = 0

$\Rightarrow$ 28 – 7 × 2 × 2 = 0

$\Rightarrow$ 28 – 28 = 0

23. (*) There are two equations and it is not possible to correlate the two equations as per the information given in the question.

24. (2) 6 × 4 + 2 = 16

$\Rightarrow$ 4 + 6 × 2 = 16

$\Rightarrow$ 4 + 12 = 16

25. (4) 6 + 2 – 3 = 16

$\Rightarrow$ 6 × 3 – 2 = 16

$\Rightarrow$ 18 – 2 = 16

26. (3) Option (1)

8 – 7 + 3 × 5 = 35

$\Rightarrow$ 7 + 8 – 3 × 5 = 35

$\Rightarrow$ 7 + 8 – 15 ≠ 35

Option (2)

7 × 8 + 6 – 9 = 25

$\Rightarrow$ 8 × 7 – 6 + 9 = 25

$\Rightarrow$ 56 – 6 + 9 ≠ 25

Option (3)

6 + 8 × 2 – 7 = 0

$\Rightarrow$ 6 – 7 × 2 + 8 = 0

$\Rightarrow$ 6 – 14 + 8 = 0

$\Rightarrow$ 14 – 14 = 0

Option (4)

8 × 2 + 7 – 6 = 9

$\Rightarrow$ 7 × 2 – 8 + 6 = 9

$\Rightarrow$ 14 – 14 ≠ 9

27. (1) 5 + 3 × 8 – 12 ÷ 4 = 3

$\Rightarrow$ 5 + 3 × 8 ÷ 12 – 4 = 3

$\Rightarrow$ 5 + $\dfrac{3 \times 8}{12}$ – 4 = 3

$\Rightarrow$ 5 + 2 – 4 = 3