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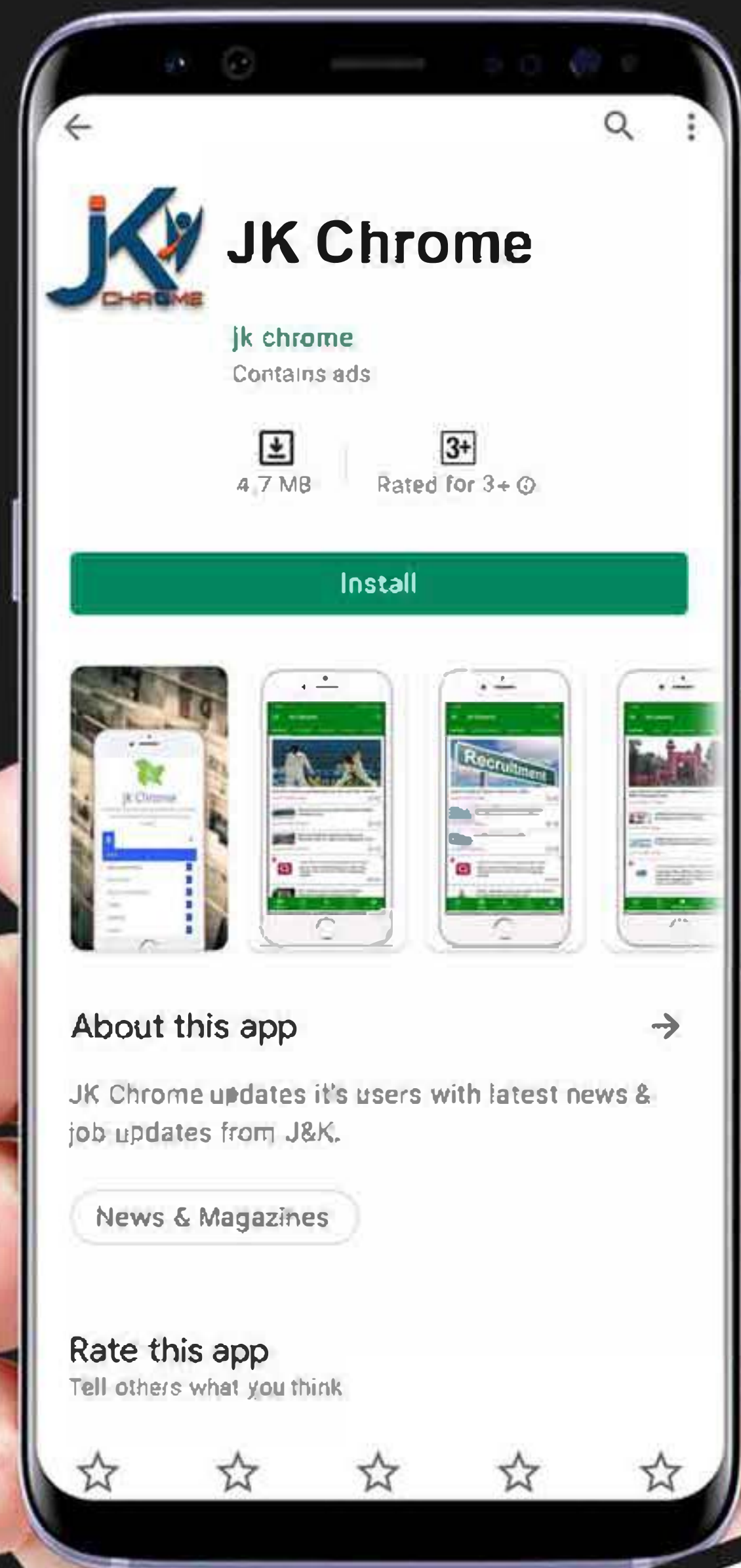
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# SSC CPO 06 July 2017 Morning Shift

## Reasoning

### Instructions

For the following questions answer them individually

### Question 1

In the following question, select the related word from the given alternatives:

Farmer : Field :: Painter : ?

- A Gallery
- B Stage
- C Theatre
- D Shop

Answer: A

### Explanation:

First works in the second, farmer works in a field, likewise a painter works in a **gallery**.

> Ans - (A)

### Question 2

In the following question, select the related word from the given alternatives:

Sunday : Thursday :: Wednesday : ?

- A Sunday
- B Friday
- C Saturday
- D Monday

Answer: A

### Explanation:

Expression Sunday : Thursday :: Wednesday : ?

The difference between the days is 4.

Sunday (+4) Thursday

Similarly, Wednesday (+4) **Sunday**

> Ans - (A)

### Question 3

In the following question, select the related letters from the given alternatives:

MN : OL :: SH : ?

- A VE
- B UF
- C UG
- D VF

**Answer: B**

**Explanation:**

Expression MN : OL :: SH : ?

The pattern followed is :

M	N
(+2)	(-2)
O	L

Similarly, for SH : **UF**

S	H
(+2)	(-2)
U	F

> Ans - (B)

**Question 4**

In the following question, select the related letters from the given alternatives:

STOP : TRVT :: ? : ?

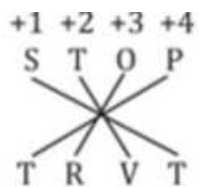
- A MIND : IQLO
- B HAIL : PLCI
- C SAND : UDHS
- D BANK : CCQO

**Answer: B**

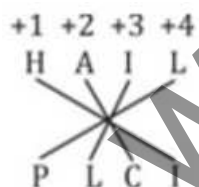
**Explanation:**

Expression STOP : TRVT :: ? : ?

The pattern followed is :



Similar pattern is observed only in HAIL : PLCI



> Ans - (B)

**Question 5**

In the following question, select the related number from the given alternatives:

48 : 216 :: 64 : ?

- A 288

- B 276
- C 312
- D 264

**Answer: A**

**Explanation:**

Expression  $48 : 216 :: 64 : ?$

The pattern followed is that the quotient when second number is divided by first is 4.5

Eg :-  $\frac{216}{48} = 4.5$

Similarly,  $64 \times 4.5 = 288$

> Ans - (A)

**Question 6**

**In the following question, select the related number from the given alternatives:**

**36 : 27 :: 196 : ?**

- A 257
- B 89
- C 173
- D 343

**Answer: D**

**Explanation:**

Expression  $36 : 27 :: 196 : ?$

The pattern followed is  $(n)^2 : \left(\frac{n}{2}\right)^3$

Eg :-  $(6)^2 : \left(\frac{6}{2}\right)^3 = 36 : 27$

Similarly,  $(14)^2 = 196$

>  $\left(\frac{14}{2}\right)^3 = (7)^3 = 343$

> Ans - (D)

**Question 7**

**In the following question, select the odd word pair from the given alternatives:**

- A Speaker - Sound
- B Bulb - Light
- C Fire - Heat
- D Earth - Land

**Answer: D**

**Explanation:**

First is the source of second, sound comes from speaker, light from a bulb and fire provides heat, hence **Earth - Land** is the odd one.

> Ans - (D)

**Question 8**

In the following question, select the odd word pari from the given alternatives:

- A Wheat - Rabi
- B Rice - Rabi
- C Maize - Kharif
- D Barley - Rabi

**Answer:** B

**Explanation:**

First is the type of second, Wheat and barley are rabi crops, while rice and maize are kharif crops, hence **Rice - Rabi** is the odd one.

> Ans - (B)

**Question 9**

In the following question, select the odd letters from the given alternatives:

- A GEF
- B MLK
- C IKJ
- D VWY

**Answer:** D

**Explanation:**

In the first three options, the given combinations are groups of consecutive letters from English alphabetical series, i.e. (EFG), (KLM), (IJK), hence **VWY** is the odd one.

> Ans - (D)

**Question 10**

In the following question, select the odd letters from the given alternatives

- A AEI
- B IMQ
- C EIL
- D MQU

**Answer:** C

**Explanation:**

(A) : A (+4) E (+4) I

(B) : I (+4) M (+4) Q

(C) : E (+4) I (+3) L

(D) : M (+4) Q (+4) U

> Ans - (C)

**Question 11**

In the following question, select the odd number-pair from the given alternatives:

A 15-45

B 9-29

C 31-93

D 41-123

**Answer:** B

**Explanation:**

If we divide the second number by first number, quotient is 3.

$$(A) : \frac{45}{15} = 3$$

$$(B) : \frac{29}{9} = 3.22$$

$$(C) : \frac{93}{31} = 3$$

$$(D) : \frac{123}{41} = 3$$

> Ans - (B)

**Question 12**

In the following question, select the odd number-pair from the alternatives:

A 8-72

B 6-42

C 12-156

D 4-12

**Answer:** D

**Explanation:**

The numbers are of the form :  $n^2 + n$

$$(A) : (8)^2 + 8 = 72$$

$$(B) : (6)^2 + 6 = 42$$

$$(C) : (12)^2 + 12 = 156$$

$$(D) : (4)^2 + 4 = 20 \neq 12$$

> Ans - (D)

**Question 13**

Arrange the given words in the sequence in which they occur in the dictionary:

1. Reputation
2. Reptile
3. Republic
4. Replicate
5. Repository

A 42531

B 43251

C 45312

D 45231

**Answer: D**

**Explanation:**

As per the order of dictionary,

Replicate -> Repository -> Reptile -> Republic -> Reputation

≡ 45231

> Ans - (D)

**Question 14**

Arrange the given words in the sequence in which they occur in the dictionary:

1. Habit

2. Habitat

3. Handle

4. Hammer

5. Harvest

A 21453

B 12435

C 21435

D 14253

**Answer: B**

**Explanation:**

As per the order of dictionary,

Habit -> Habitat -> Hammer -> Handle -> Harvest

≡ 12435

> Ans - (B)

**Question 15**

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

B, G, N, W, ?

A I

B G

C J

D H

**Answer: D**

**Explanation:**

Consecutive odd numbers are added.

B (+5) G (+7) N (+9) W (+11) H

> Ans - (D)

**Question 16**

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series:  
B, E, I, S, K, ?

A W

B X

C U

D V

Answer: A

**Explanation:**

The letters corresponding to the above series are : B(2), E(5), I(9), S(19), K(11 or 37)

$$2 \times 2 + 1 = 5$$

$$5 \times 2 - 1 = 9$$

$$9 \times 2 + 1 = 19$$

$$19 \times 2 - 1 = 37 \text{ (or 11)}$$

$$11 \times 2 + 1 = 23 \equiv W$$

&gt; Ans - (A)

**Question 17**

In the following question, select the missing number from the given series:  
67, 70, 74, 77, 81, 84 ?

A 87

B 88

C 86

D 89

Answer: B

**Explanation:**

'3' and '4' are alternatively added.

$$67 + 3 = 70$$

$$70 + 4 = 74$$

$$74 + 3 = 77$$

$$77 + 4 = 81$$

$$81 + 3 = 84$$

$$84 + 4 = \mathbf{88}$$

&gt; Ans - (B)

**Question 18**

In the following question, select the missing number from the given series:  
6, 19, 54, 167, 494, ?



- A 1491
- B 1553
- C 1361
- D 1642

**Answer: A**

**Explanation:**

The pattern followed is :

$$6 \times 3 + 1 = 19$$

$$19 \times 3 - 3 = 54$$

$$54 \times 3 + 5 = 167$$

$$167 \times 3 - 7 = 494$$

$$494 \times 3 + 9 = 1491$$

> Ans - (A)

**Question 19**

In a row of cars, red car is 14th from left and 23rd from right. How many cars are there in the row ?

- A 36
- B 37
- C 35
- D 34

**Answer: A**

**Explanation:**

Red car is 14th from left and 23rd from right

> Total number of cars  $(14 + 23) - 1 = 36$

> Ans - (A)

**Question 20**

In a row of people, there are 12 people before Q. There are 4 people between P and Q. There are 15 people between Q and S. If there are 8 people between S and R, then how many minimum people are there in the row ?

- A 29
- B 32
- C 36
- D 37

**Answer: A**

**Explanation:**

There are 12 people before Q, > Let us assume Q is at 13th position from left end.

There are 15 people between Q and S, > S is at 29th position.

There are 4 people between P and Q, > P can be either at 8th or 18th position from left.

There are 8 people between S and R, > R is at 20th position.

Thus, there are minimum of **29 people** in the row.

> Ans - (A)

#### Question 21

If 'P 3 Q' means 'Q is daughter of P', 'P 5 Q' means 'Q is son of P', 'P 7 Q' means 'P is sister Q', 'P 9 Q' means 'P is brother of Q'. Which of the following Expression indicates A is nephew of D ?

A B 9 D 5 C 5 A

B B 7 D 9 C 5 A

C B 7 D 7 C 3 A

D B 7 D 9 C 3 A

**Answer: B**

#### Explanation:

(A) : B 9 D 5 C 5 A

B is brother of D and D is son of C.

Also, C is son of A, > A is either grandfather or grandmother of D.

(B) : B 7 D 9 C 5 A

B is sister of D and D is brother of C.

Also, A is son of C, > A is nephew of D.

> Ans - (B)

#### Question 22

In the following question, select the word which cannot be formed using the letters of the given word.

**ENCOURAGING**

A GRAIN

B RAGING

C GAUGE

D ENCOURAGE

**Answer: D**

#### Explanation:

The word ENCOURAGING does not contain any 'E', thus the term **Encourage** cannot be formed.

> Ans - (D)

#### Question 23

In the following question, select the word which cannot be formed using the letters of the given word.

**LANGUAGE**

A SLANG

- B GAUGE
- C GLANE
- D GANGUE

**Answer: A**

**Explanation:**

The word LANGUAGE does not contain any 'S', thus the term **Slang** cannot be formed.

> Ans - (A)

**Question 24**

In a certain code language, "RESTED" is written as "SDTSFC". How is "BANNED" written in that code language ?

- A CZOMFC
- B ABMODE
- C CZOODE
- D ABMMFC

**Answer: A**

**Explanation:**

Expression : "RESTED" is written as "SDTSFC"

The pattern followed is :

R	E	S	T	E	D
(+1)	(-1)	(+1)	(-1)	(+1)	(-1)
S	D	T	S	F	C

Similarly, for BANNED : **CZOMFC**

B	A	N	N	E	D
(+1)	(-1)	(+1)	(-1)	(+1)	(-1)
C	Z	O	M	F	C

> Ans - (A)

**Question 25**

In a certain code language, "CONGO" is written as "RZPRD" and "TREAT" is written as "UQGWX". How is "PHONE" written in that code language ?

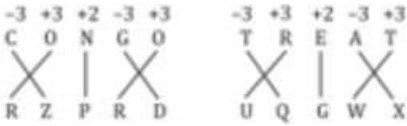
- A JNQIJ
- B KMQHK
- C MKQKH
- D LLPIL

**Answer: B**

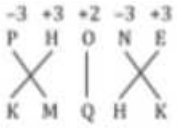
**Explanation:**

"CONGO" is written as "RZPRD" and "TREAT" is written as "UQGWX"

The pattern followed is :



Similarly, for PHONE : **KMQHK**



> Ans - (B)

### Question 26

If "@" denotes "added to", "#" denotes "multiplied by", "Ⓡ" denotes "divided by" and "%" denotes "subtracted from", then which of the following equation is true?

- A  $8@8\textcircled{R}8\#8\%8 = 9$
- B  $42\%26\textcircled{R}13\#2@8 = 46$
- C  $19\%84\textcircled{R}4@3\#4 = 12$
- D  $31\%4\textcircled{R}2\#19@3 = 4$

Answer: B

### Explanation:

(A):  $8@8\textcircled{R}8\#8\%8 = 9$

$$\equiv 8 + 8 \div 8 \times 8 - 8$$

$$\text{L.H.S. } 8 + 8 - 8 = 8 \neq \text{R.H.S.}$$

(B):  $42\%26\textcircled{R}13\#2@8 = 46$

$$\equiv 42 - 26 \div 13 \times 2 + 8$$

$$\text{L.H.S. } 42 - 4 + 8 = 46 = \text{R.H.S.}$$

> Ans - (B)

### Question 27

If "A" denotes "added to", "B" denotes "subtracted from", "C" denotes "multiplied by" and "D" denotes "divided by" then which of the following equation is true?

- A  $12 A 6 B 3 C 4 D 3 = 14$
- B  $13 B 6 D 3 C 2 A 5 = 12$
- C  $72 D 18 C 14 B 68 A 10 = -4$
- D  $68 D 4 A 6 B 3 C 8 = 0$

Answer: A

### Explanation:

(A):  $12 A 6 B 3 C 4 D 3 = 14$

$$\equiv 12 + 6 - 3 \times 4 \div 3 = 14$$

$$\text{L.H.S. } 12 + 6 - \left(\frac{3 \times 4}{3}\right)$$

$$18 - 4 = 14 = \text{R.H.S.}$$

> Ans - (A)

### Question 28

If  $6 \# 8 = 10$  and  $5 \# 12 = 13$ , then  $9 \# 40 = ?$

A 47

B 63

C 41

D 53

Answer: C

### Explanation:

The pattern followed is :  $a \# b = c \equiv a^2 + b^2 = c^2$

$$\text{Eg :- } (6)^2 + (8)^2 = 36 + 64 = 100 = (10)^2$$

$$\text{and } (5)^2 + (12)^2 = 25 + 144 = 169 = (13)^2$$

$$\text{Similarly, } (9)^2 + (40)^2 = 81 + 1600 = 1681 = (41)^2$$

> Ans - (C)

### Question 29

If  $7(110)4$  and  $19(930)12$ , then what is the value of 'A' in  $16(A)9$  ?

A 580

B 600

C 640

D 700

Answer: B

### Explanation:

The pattern followed is that for the numbers :  $x(z)y, z = (x + y) \times (x + y - 1)$

$$\text{Eg :- } 7(110)4 \text{ > Here } 7 + 4 = 11 \equiv (11 \times 10) = 110$$

$$\text{and } 19(930)12 \text{ > Here } 19 + 12 = 31 \equiv (31 \times 30) = 930$$

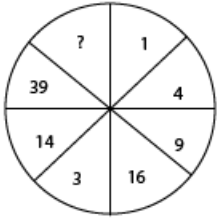
$$\text{Similarly, } 16(A)9 \text{ > Here } 16 + 9 = 25$$

$$\text{> } A = 25 \times 24 = 600$$

> Ans - (B)

## Question 30

In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.



- A 84
- B 91
- C 83
- D 95

Answer: A

## Explanation:

The pattern followed for the diagonally opposite numbers are  $x \times n + (n - 1)$ , where  $n$  is a natural number starting from 2.

$$(1,3) \quad 1 \times 2 + (2 - 1) = 2 + 1 = 3$$

$$(4,14) \quad 4 \times 3 + (3 - 1) = 12 + 2 = 14$$

$$(9,39) \quad 9 \times 4 + (4 - 1) = 36 + 3 = 39$$

$$\text{Similarly, } 16 \times 5 + (5 - 1) = 80 + 4 = 84$$

> Ans - (A)

## Question 31

In the following question, select the number which can be placed at the sign of question mark(?) from the given alternatives.

4		15		12	
9		19		7	
6	6	3	?	4	21

- A 105
- B 95
- C 190
- D 120

Answer: B

## Explanation:

In the first column, the product of the first two numbers is divided by the last number to get the number in the second column.

$$\text{Eg :- } \frac{4 \times 9}{6} = 6$$

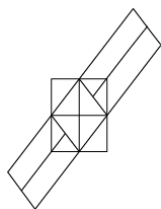
$$\text{and } \frac{12 \times 7}{4} = 21$$

$$\text{Similarly, } \frac{15 \times 19}{3} = 95$$

> Ans - (B)

**Question 32**

How many rectangles are there in the given figure?



- A 19
- B 16
- C 17
- D 18

Answer: A

**Question 33**

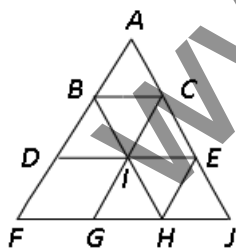
How many triangles are there in the given figure?



- A 12
- B 11
- C 10
- D 15

Answer: B

Explanation:



Small triangles ABC, BID, BCI, CIE, GIH, HIE, JEH  
 Big triangles (having 3 or 4 triangles) ADE, BFH, CGJ  
 Biggest triangle AFJ  
 > Total triangles 11  
 > Ans - (B)

**Question 34**

In the following question below are given some statements followed by some Conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the Conclusions and then decide which of the given Conclusion logically follows the given statements.

**Statements:**

- I. Some clothes are white.
- II. Some white are flags.
- III. No flag is straight.

**Conclusions:**

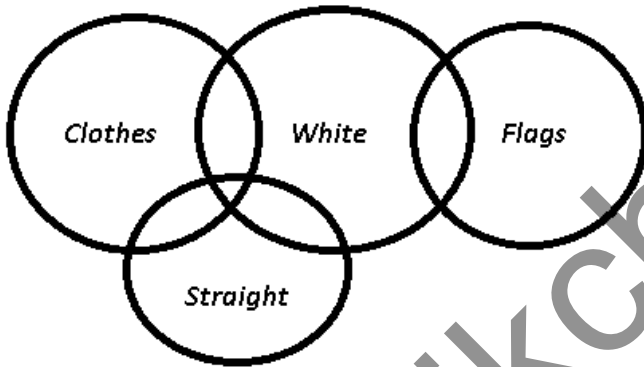
- I. No cloth is straight.
- II. Some white are straight
- III. Some flags are clothes.

- A Only Conclusion I follows
- B Only Conclusion II follows
- C Only Conclusion III follows
- D None follows

**Answer: D**

**Explanation:**

The venn diagram for above statements is :



**Conclusions:**

- I. No cloth is straight    false
- II. Some white are straight    may or may not be true
- III. Some flags are clothes    false

Thus, none follows.

> Ans - (D)

**Question 35**

In the following question below are given some statements followed by some Conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the Conclusions and then decide which of the given Conclusion logically follows the given statements.

**Statements:**

- I. All pages are yellow.
- II. All yellow are newspapers
- III. Some newspapers are national.

**Conclusions:**

- I. Some national are yellow.
- II. Some newspapers are pages.
- III. No page is national.

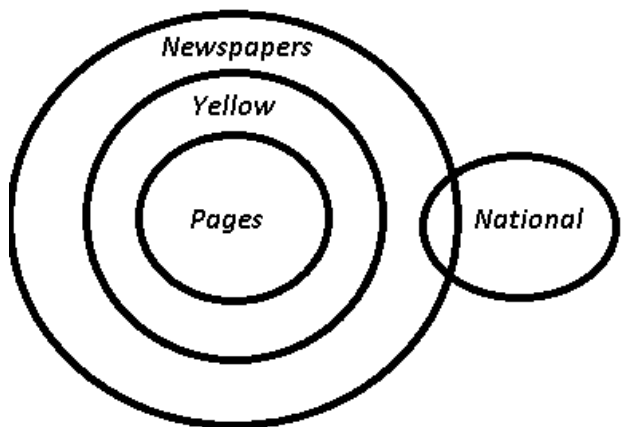


- A Only Conclusion I and II follow
- B Only Conclusion I and III follow
- C Only Conclusion II follow
- D Only Conclusion III follow

Answer: C

**Explanation:**

The venn diagram for above statements is :



Conclusions:

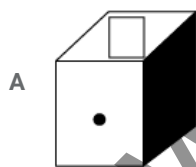
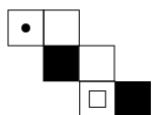
- I. Some national are yellow false
- II. Some newspapers are pages true
- III. No page is national may or may not be true

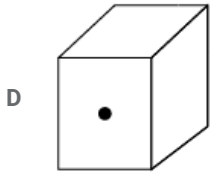
Thus, only Conclusion II follow.

> Ans - (C)

**Question 36**

From the given options, which answer figure can be formed by folding the figure given in the question ?

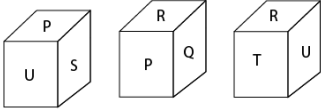




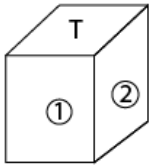
Answer: A

Question 37

Three positions of a cube are shown below.



Which letters will come on two faces marked '1 and 2' ?



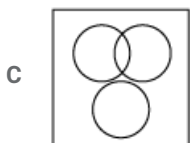
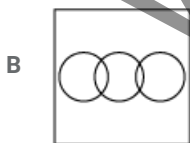
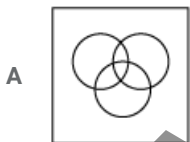
- A U and P
- B Q and R
- C P and S
- D R and P

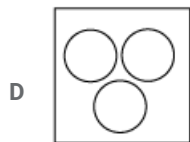
Answer: B

Question 38

Identify the diagram that best represents the relationship among the given classes.

Yellow, Vegetables, Red Blood

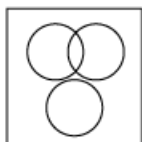




Answer: C

**Explanation:**

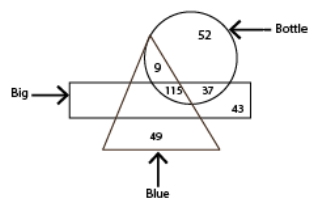
Some vegetables are yellow in colour, but red blood is completely different from them, hence the venn diagram that best describes above relationship is :



> Ans - (C)

**Question 39**

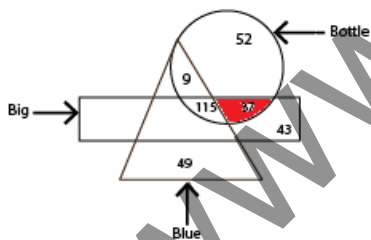
In the given figure, how many big bottles are not blue?



- A 37
- B 115
- C 152
- D 89

Answer: A

**Explanation:**

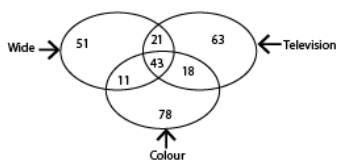


Big bottles that are not blue 37

> Ans - (A)

**Question 40**

In the given figure, how many colour televisions are not wide?



- A 72

- B 18
- C 43
- D 61

Answer: B

Explanation:

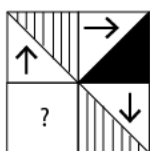


Colour televisions that are not wide 18

> Ans - (B)

Question 41

Which answer figure will complete the pattern in the question figure ?



- A
- B
- C
- D

Answer: C

Explanation:

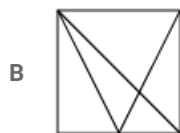
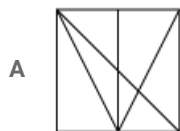
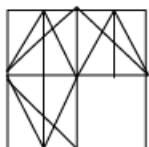
In the question figure, the arrows are forming a clock wise pattern, thus the arrow in the missing figure must point towards left, hence first two options are eliminated.

Also, to form the complete diagonal, we need to have the black triangle at the top left side, hence third figure is the required answer.

> Ans - (C)

Question 42

Which answer figure will complete the pattern in the question figure ?



Answer: D

Explanation:

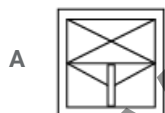
The question figure will be completed by :



> Ans - (D)

Question 43

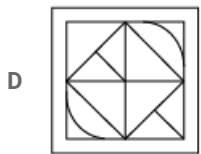
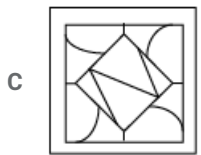
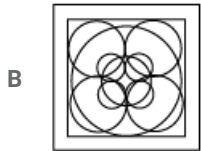
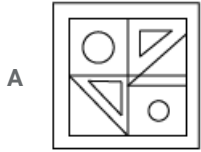
From the given answer figures, select the one in which the question figure is hidden/embedded.



Answer: D

Question 44

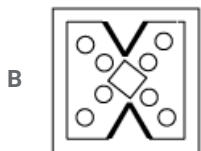
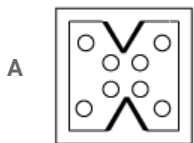
From the given answer figures, select the one in which the question figure is hidden/embedded.

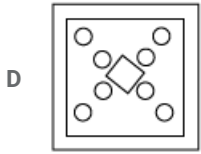
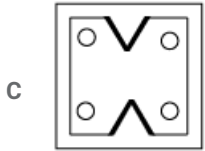


Answer: D

Question 45

A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened?

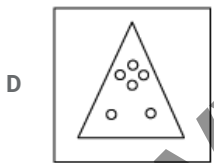
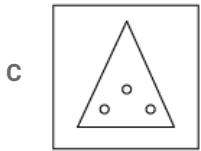
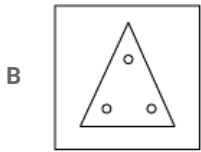
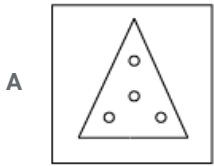
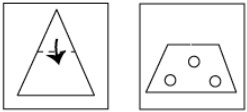




Answer: A

Question 46

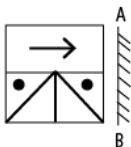
A piece of paper is folded and punched as shown below in the question figures, indicate how it will appear when opened?

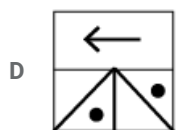
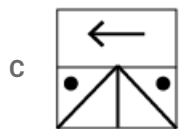
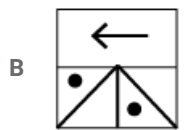
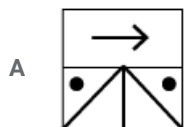


Answer: A

Question 47

If a mirror is placed on the line AB, then which of the answer figures is the right image of the given figure?





Answer: C

**Explanation:**

A vertical mirror is placed, so the object on the left will appear right in reverse position and vice-versa.

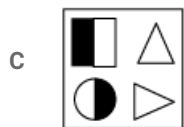
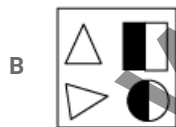
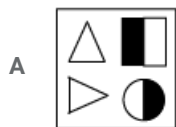
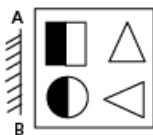
So the arrow in the middle will be reversed and now point leftwards, thus the first option will be eliminated.

Also, in the question figure, the two dots are at the extreme ends, which will remain as it is, hence third option is the right image.

> Ans - (C)

**Question 48**

If a mirror is placed on the line AB, then which of the answer figures is the right image of the given figure?



Answer: A



## Question 49

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabet as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column., for example, 'B' can be represented by 04, 20, etc., and 'I' can be represented by 56, 95, etc. Similarly, you have to identify the set for the word "SLAP".

Matrix-I

	0	1	2	3	4
0	L	A	M	Y	B
1	M	Y	B	L	A
2	B	L	A	M	Y
3	A	M	Y	B	L
4	Y	B	L	A	M

Matrix-II

	5	6	7	8	9
5	O	T	S	R	P
6	S	O	P	T	R
7	P	R	O	S	T
8	R	P	T	O	S
9	T	S	R	P	O

- A 57, 00, 20, 13  
 B 65, 21, 75, 66  
 C 78, 34, 43, 86  
 D 96, 42, 98, 77

Answer: C

## Explanation:

- (A) : 57, 00, 20, 13 SLBL  
 (B) : 65, 21, 75, 66 SLPO  
 (C) : 78, 34, 43, 86 SLAP  
 (D) : 96, 42, 98, 77 SLPO  
 > Ans - (C)

## Question 50

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabet as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column., for example, 'R' can be represented by 10, 42, etc., and 'I' can be represented by 75, 99, etc. Similarly, you have to identify the set for the word "BOND".

Matrix-I

	0	1	2	3	4
0	B	D	A	R	E
1	R	E	D	B	R
2	D	R	E	A	B
3	E	A	B	D	A
4	A	B	R	E	D

Matrix-II

	5	6	7	8	9
5	L	O	G	U	N
6	O	N	U	G	L
7	U	L	N	O	G
8	G	U	L	N	O
9	N	G	O	L	U

- A 00, 97, 56, 59  
 B 13, 65, 66, 22  
 C 24, 78, 33, 13  
 D 32, 89, 59, 20

Answer: D

**Explanation:**

(A) : 00, 97, 56, 59 BOON

(B) : 13, 65, 66, 22 BONE

(C) : 24, 78, 33, 13 BODB

(D) : 32, 89, 59, 20 **BOND**

> Ans - (D)

## General Awareness

**Instructions**

For the following questions answer them individually

**Question 51**

\_\_\_ unemployment happens when people are not able to find jobs during some months of the year.

A Seasonal

B Disguised

C Educated

D Technical

**Answer: A**

**Question 52**

Which among the following come under secondary sector of Indian Economy ?

A Cloth Industry

B Transport of goods

C Cotton production

D Banking

**Answer: A**

**Question 53**

In which economic system the goods produced are distributed among people not on the basis of what people need but on the basis of Purchasing Power ?

A Socialist

B Mixed

C Capitalist

D Marxist

**Answer: C**

**Question 54**

Which among the following is an example of progressive tax ?

- A Excise duty
- B Octroi
- C Income tax
- D House tax

**Answer: C**

**Question 55**

In which year 'New Economic Policy' was announced in India ?

- A 1990
- B 1991
- C 1992
- D 1989

**Answer: B**

**Question 56**

Who among the following is a part of political executive ?

- A District Magistrate
- B Secretary of Ministry of defence
- C Finance Minister
- D Superintendent of Police

**Answer: C**

**Question 57**

Indian Parliament is \_\_\_\_\_

- A Unicameral
- B Bicameral
- C Tri cameral
- D None of these

**Answer: B**

**Question 58**

Which among the following country is not a part of 'Second World Countries' ?

- A Russia
- B China
- C Mongila
- D Argentina

**Answer: D**

**Question 59**

Which article in Indian Constitution describes India as 'Union Of State' ?

- A Article 1
- B Article 2
- C Article 3
- D Article 4

**Answer: A**

**Question 60**

In which Constitutional Amendment Act socialist and secular were added to Preamble of Indian

- A 40th Constitutional Amendment Act
- B 42th Constitutional Amendment Act
- C 44th Constitutional Amendment Act
- D 49th Constitutional Amendment Act

**Answer: B**

**Question 61**

Indian Constitution provides how many writs ?

- A 4
- B 5
- C 6
- D 7

**Answer: B**

**Question 62**

Latex

- A 1-c, 2-b, 3-a
- B 1-b, 2-c, 3-a
- C 1-a, 2-b, 3-c
- D 1-c, 2-a, 3-b

**Answer: A**

**Question 63**

**Who described Constitution of India as 'quasi-federal'?**

- A Granville Austin
- B Ione Jennings
- C Morris Jones
- D K.C. Wheare

**Answer: D**

**Question 64**

**How many Mahajanapadas were there in ancient India ?**

- A 20
- B 16
- C 18
- D 10

**Answer: B**

**Question 65**

**In which century Bhakti movement began ?**

- A 6th century
- B 7th century
- C 8th century
- D 9th century

**Answer: B**

**Question 66**

**Marco-polo, a famous traveler, was native of which country ?**

- A Uzbekistan
- B Italy

C Morocco

D Russia

Answer: B

#### Question 67

set the following dynasties in chronological order of their period of rule.

1. Khilji Dynasty
2. Lodhi Dynasty
3. Tughlaq Dynasty

A 1, 3, 2

B 3, 1, 2

C 2, 3, 1

D 3, 2, 1

Answer: A

#### Question 68

In which year Quit India movement started ?

A 1939

B 1940

C 1942

D 1945

Answer: C

#### Question 69

Which among the following is not a cash crop ?

A Cotton

B Groundnut

C Tea

D Jowar

Answer: D

#### Question 70

How much portion of earth's surface is covered by water ?

A One-third

- B One-fourth
- C Two-third
- D Half

**Answer: C**

**Question 71**

**Indian Standard Time (IST) is based upon Indian Standard Meridian which passes through.**

- A Jaipur
- B Kolkata
- C Ahmedabad
- D Allahabad

**Answer: D**

**Question 72**

**Which among the following river is also known as 'Tsangpo' ?**

- A Krishna
- B Godavari
- C Ganga
- D Brahmaputra

**Answer: D**

**Question 73**

**'Chumbi Valley' is located in which state ?**

- A Sikkim
- B Himachal Pradesh
- C Uttarakhand
- D Kashmir

**Answer: A**

**Question 74**

**Guard cells surrounds \_\_\_\_**

- A Nucleus
- B Stomata
- C Golgi apparatus

D Mitochondria

Answer: B

**Question 75**

What are male gametes called as ?

A Zygote

B Ova

C Sperms

D Embryo

Answer: C

**Question 76**

At which period of life, body undergoes changes leading to reproductive maturity ?

A Adulthood

B Adolescence

C Adrenaline change

D Target period

Answer: B

**Question 77**

Which of the following cell organelles are present only in plant cell ?

A Cell membrane

B Cell wall

C Mitochondria

D Lysosomes

Answer: B

**Question 78**

Two Bones are connected to each other by connective tissue called as \_\_\_\_

A tendon

B ligament

C neuron

D adipose

Answer: B



## Question 79

Match the following.

	<b>Mode of reproduction</b>		<b>Organism</b>
<b>1</b>	Fission	<b>a.</b>	Planaria
<b>2</b>	Regeneration	<b>b.</b>	Ameoba
<b>3</b>	Budding	<b>c.</b>	Hydra

A 1-b, 2-a, 3-c

B 1-a, 2-c, 3-b

C 1-c, 2-a, 3-b

D 1-a, 2-b, 3-c

Answer: A

## Question 80

A\_\_\_ splits sunlight into seven colours.

A concave lens

B convex lens

C prism

D concave mirror

Answer: C

## Question 81

What is the process of conversion from solid to as is known as ?

A Fusion

B Solidification

C Sublimation

D Condensation

Answer: C

## Question 82

At what temperature water converts to water vapour ?

A 273k

B 100k

C 373k

D Ok

Answer: C

**Question 83**

What is the unit of frequency ?

A Decible

B Watt

C Hertz

D Newton

Answer: C

**Question 84**

Which among the following is/ are output devices ?

I. Scanner

II. Speker

III. Plotter

A Only I

B Only II

C Both II and III

D Both I and III

Answer: C

**Question 85**

IBM 701, IBM 702, IBM 650 are examples of \_\_\_\_

A First generation computer

B Second generation computer

C Third generation computer

D Fourth generation computer

Answer: A

**Question 86**

Spinach contains \_\_\_\_

A Lactic Acid

B Oxalic Acid

C Carbonic Acid

D Formic Acid

Answer: B

**Question 87**

Which among the following is a negatively charged ion ?

A Calcium ion

B Zinc ion

C Silver ion

D Iodine ion

Answer: D

**Question 88**

What is the common name of sodium carbonate ?

A Limestone

B Lime

C Marble

D Washing soda

Answer: D

**Question 89**

Which of the following is most reactive in nature ?

A Potassium

B Calcium

C Lead

D Copper

Answer: A

**Question 90**

Which among the following is not a Biotic component of environment ?

A Parasites

B Decomposers

C Non-Green plants

D Soil

Answer: D

**Question 91**

Bleaching liquors are inorganic pollutants produced mainly by which Industry/Industries ?

- I. Paper and Pulp Industry
- II. Iron and Steel Industry
- III. Mining Industry

- A Only I
- B Only II
- C ONLY III
- D Both II and III

**Answer: A**

**Question 92**

Which among the following is not a Kharif crop ?

- A Tur daal (arhar)
- B Bajra
- C Wheat
- D Maize

**Answer: C**

**Question 93**

Under MUDRA Bank, loan ranging from Rs. 50,000 to Rs. 5,00,000 is categorized under.

- A Shishu
- B Kishor
- C Tarun
- D Atul

**Answer: B**

**Question 94**

Who among the following discovered blood group ?

- A Joseph Fourter
- B Karl Landsteiner
- C M. S. Swami Nathan
- D Richael Carison

**Answer: B**

**Question 95**

'Faster, Higher, Stronger' is motto for which of the following Games Event ?

- A Asian Games
- B IPL
- C Olympics
- D FIFA World Cup

**Answer: C**

**Question 96**

'Jamini Roy' was associated with which Art form ?

- A Dancing
- B Singing
- C Drama
- D Painting

**Answer: D**

**Question 97**

Which film has been awarded with Best film on Social issue in 64th National film Awards.

- A Dangal
- B Sultan
- C Pink
- D Jolly L.L.B. 2

**Answer: C**

**Question 98**

'My Country My Life' is written by \_\_\_\_

- A Raghav Bahal
- B Lal Krishna Advani
- C Mamta Banerjee
- D Meira Kumar

**Answer: B**

**Question 99**

Which of the following was the fifth country to join BRICS ?

- A Argentina
- B South Africa
- C Spain
- D Sri Lanka

**Answer: B**

**Question 100**

Kaldan transport project is between India and \_\_\_\_.

- A Nepal
- B Bhutan
- C Myanmar
- D Afghanistan

**Answer: C**

Quant

**Instructions**

For the following questions answer them individually

**Question 101**

If  $x = 7 + 2\sqrt{10}$ , then what is the value of  $(\sqrt{x} - \frac{1}{\sqrt{x}})$

- A  $2\sqrt{2}$
- B  $\frac{2}{3}(2\sqrt{5} + \sqrt{2})$
- C  $-2\sqrt{2}$
- D  $\frac{2}{3}(2\sqrt{2} + \sqrt{5})$

**Answer: D**

**Explanation:**

Expression :  $x = 7 + 2\sqrt{10}$

$$> x = (\sqrt{5})^2 + (\sqrt{2})^2 + 2(\sqrt{5})(\sqrt{2})$$

Using,  $a^2 + b^2 + 2ab = (a + b)^2$

$$> x = (\sqrt{5} + \sqrt{2})^2$$

$$> \sqrt{x} = \sqrt{5} + \sqrt{2} \text{ —————(i)}$$

Also,  $\frac{1}{\sqrt{x}} = \frac{1}{\sqrt{5} \sqrt{2}}$

Rationalizing the denominator, we get :

$$> \frac{1}{\sqrt{x}} = \frac{1}{\sqrt{5} \sqrt{2}} \times \left( \frac{\sqrt{5} \sqrt{2}}{\sqrt{5} \sqrt{2}} \right)$$

$$> \frac{1}{\sqrt{x}} = \frac{\sqrt{5} \sqrt{2}}{5 \cdot 2}$$

$$> \frac{1}{\sqrt{x}} = \frac{(\sqrt{5} \sqrt{2})}{3} \text{ ----(ii)}$$

Subtracting equation (ii) from (i),

$$\therefore (\sqrt{x} - \frac{1}{\sqrt{x}}) = (\sqrt{5} + \sqrt{2}) - \left( \frac{\sqrt{5} \sqrt{2}}{3} \right)$$

$$\frac{2\sqrt{5}}{3} + \frac{4\sqrt{2}}{3}$$

$$\frac{2}{3}(2\sqrt{2} + \sqrt{5})$$

> Ans - (D)

### Question 102

Which of the following relations is/are true?

I.  $\sqrt{7} + \sqrt{3} > \sqrt{5} + \sqrt{5}$

II.  $\sqrt{5} + \sqrt{5} > \sqrt{2} + \sqrt{8}$

III.  $\sqrt{5} + \sqrt{5} > \sqrt{7} + \sqrt{3}$

A Only I

B Only II and III

C Only I and III

D All I, II and III

Answer: B

**Explanation:**

The sum of (7,3), (5,5) and (2,8) is 10.

Thus, squaring all the terms we get:  $(\sqrt{7} + \sqrt{3})^2 = 10 + 2\sqrt{21}$

$$(\sqrt{5} + \sqrt{5})^2 = 10 + 2\sqrt{25}$$

$$\text{and } (\sqrt{2} + \sqrt{8})^2 = 10 + 2\sqrt{16}$$

$\therefore$  First term is same (10) in all, thus  $\sqrt{25} > \sqrt{21} > \sqrt{16}$

$$\therefore \sqrt{5} + \sqrt{5} > \sqrt{7} + \sqrt{3} > \sqrt{2} + \sqrt{8}$$

> Ans - (B)

### Question 103

If  $a = 1 + \sqrt{3}$ ,  $b = 1 - \sqrt{3}$ , then what is the value of  $(a^2 + b^2)$ ?

A 4

B 8

C 0

D 2

**Answer: B**

**Explanation:**

Given :  $a = 1 + \sqrt{3}$

Squaring both sides,  $a^2 = (1 + \sqrt{3})^2$

$$a^2 = 1 + 3 + 2\sqrt{3} = 4 + 2\sqrt{3} \text{ ——(i)}$$

Similarly,  $b^2 = 4 - 2\sqrt{3}$  ——(ii)

Adding equation (i) and (ii), we get :

$$(a^2 + b^2) = (4 + 2\sqrt{3}) + (4 - 2\sqrt{3}) = 8$$

> Ans - (B)

**Question 104**

**What is the unit's place of  $12^{123}$  ?**

A 2

B 4

C 6

D 8

**Answer: D**

**Explanation:**

Unit's digit of 12 is 2. Now,  $2^1 = 2$ ,  $2^2 = 4$ ,  $2^3 = 8$  and  $2^4 = 16$  and then again the same cycle is repeated ( $2^5$  ends in 2).

Thus, numbers of the form  $2^{4n-1}$  ends in 2

$2^{4n-2}$  ends in 4

$2^{4n-3}$  ends in 8

$2^{4n}$  ends in 6

Now,  $(2)^{123} = (2)^{4n-3}$

Thus, it must end in **8**

> Ans - (D)

**Question 105**

**How many two digit numbers are divisible by 3 but not by 7 ?**

A 13

B 26

C 30

D 8

**Answer: B**

**Explanation:**

Two digit numbers divisible by 3 are : 12, 15, 18, ....., 96, 99

The above series follows an A.P. with first term  $a = 12$ , common difference  $d = 3$  and last term  $l = 99$ . Let number of terms be  $n$



$$\text{Thus, } l = a + (n - 1)d$$

$$> 12 + (n - 1)(3) = 99$$

$$> (n - 1) \times 3 = 99 - 12 = 87$$

$$> n - 1 = \frac{87}{3} = 29$$

$$> n = 29 + 1 = 30$$

Similarly, two digit numbers divisible by L.C.M. (3,7) 21 are : 21, 42, 63, 84 4 numbers

$\therefore$  Two digit numbers are divisible by 3 but not by 7  $30 - 4 = 26$

> Ans - (B)

#### Question 106

Pipe A can fill a tank in 12 hours and pipe B can fill the tank in 18 hours. If both the pipes are opened on alternate hours and if pipe B is opened first, then in how much time (in hours) the tank will be full?

A  $14\frac{1}{3}$

B  $14\frac{2}{3}$

C  $14\frac{1}{2}$

D  $14\frac{2}{5}$

Answer: C

#### Explanation:

Let capacity of tank L.C.M. (12,18) 36 litres

Pipe A can fill a tank in 12 hours, > Pipe A's efficiency  $\frac{36}{12} = 3$  litres/hr

Similarly, pipe B's efficiency  $\frac{36}{18} = 2$  litres/hr

Now, in 2 hours tank filled is (B opened first)  $2 + 3 = 5$  litres

$\therefore 5 \times 7 = 35$ , hence 35 litres of tank is filled in 14 hours.

Now, B is opened and it will fill the remaining 1 litre in  $\frac{1}{2}$  hour.

$\therefore$  Total time taken  $14\frac{1}{2}$  hours

> Ans - (C)

#### Question 107

A B and C can do a piece of work in 20, 24 and 30 days respectively. All three of them began the work together but B left 3 days before completion of the work. In how many days was the work completed ?

A 7

B 10

C 12

D 9

Answer: D

#### Explanation:

Let total work to be done L.C.M. (20,24,30) 120 units

A can do it in 20 days, > A's efficiency  $\frac{120}{20} = 6$  units/day

Similarly, B's efficiency  $\frac{120}{24} = 5$  units/day

and C's efficiency  $\frac{120}{30} = 4$  units/day

Let the work is completed in  $t$  days, hence B worked for  $(t - 3)$  days and A and C worked for  $t$  days.

According to ques,

$$> 6t + 5(t - 3) + 4t = 120$$

$$> 15t = 120 + 15 = 135$$

$$> t = \frac{135}{15} = 9$$

∴ The work was completed in **9 days**.

> Ans - (D)

### Question 108

The marked price of an article is Rs. 8480. If a discount of 12.5% is given, then what will be the selling price (in Rs.) of the article ?

A 7420

B 6890

C 6360

D 7380

**Answer: A**

### Explanation:

Marked price Rs. 8480 and discount % 12.5%

$$> \text{Selling price} = 8480 - \frac{12.5}{100} \times 8480$$

$$8480 - \frac{8480}{8} = 8480 - 1060$$

Rs. 7420

> Ans - (A)

### Question 109

An item is sold for Rs. 1428 after two successive discounts of 12.5% and 20%. What is the marked price (in Rs.) of the article ?

A 2000

B 2100

C 2040

D 2400

**Answer: C**

### Explanation:

Let marked price of article Rs.  $100x$

$$\text{After 1st discount of 12.5\%, price of article is } 100x - \frac{12.5}{100} \times 100x = \text{Rs. } 87.5x$$

$$\text{After 2nd discount of 20\%, selling price of article is } 87.5x - \frac{20}{100} \times 87.5x = \text{Rs. } 70x$$

According to ques,  $> 70x = 1428$

$$> x = \frac{1428}{70} = 20.4$$

∴ Marked price  $100 \times 20.4 = \text{Rs. } 2040$

> Ans - (C)

#### Question 110

If  $\frac{A}{B} = \frac{2}{3}$ ,  $\frac{B}{C} = \frac{4}{5}$  and  $\frac{C}{D} = \frac{3}{2}$ , then what is the ratio of A : B : C : D?

A 8 : 12 : 10 : 15

B 8 : 15 : 12 : 10

C 8 : 10 : 12 : 15

D 8 : 12 : 15 : 10

Answer: D

#### Explanation:

$$\text{Given : } \frac{A}{B} = \frac{2}{3} \text{ -----(i)}$$

$$\frac{B}{C} = \frac{4}{5} \text{ -----(ii)}$$

$$\text{and } \frac{C}{D} = \frac{3}{2} \text{ -----(iii)}$$

Multiplying equation (iii) by '5', (ii) by '3' and (i) by '4'

$$> \frac{A}{B} = \frac{8}{12}, \frac{B}{C} = \frac{12}{15} \text{ and } \frac{C}{D} = \frac{13}{10}$$

∴ A : B : C : D = 8 : 12 : 15 : 10

> Ans - (D)

#### Question 111

A started a business with Rs. 20000 and B joined after some time with Rs. 25000. If A and B share the profit in the ratio of 1 : 2 respectively, then what is the ratio of the time period of investment for A and B respectively ?

A 1 : 2

B 5 : 6

C 5 : 8

D 5 : 7

Answer: C

#### Explanation:

Let ratio of the time period of investment for A and B respectively be  $x$  and  $y$  years.

Investment of A Rs. 20,000 and by B Rs. 25,000

> Ratio 4 : 5

$$\text{Thus, ratio of profits } \frac{4x}{5y} = \frac{1}{2}$$

$$> \frac{x}{y} = \frac{1}{2} \times \frac{5}{4} = \frac{5}{8}$$

∴ Ratio of the time period of investment for A and B respectively 5 : 8

> Ans - (C)

**Question 112**

The average of six consecutive even numbers is 25. If the next even number is also considered, what is the new average ?

- A 27  
B 25  
C 26  
D 28

**Answer:** C

**Explanation:**

Let the six consecutive even numbers be  $(x - 5), (x - 3), (x - 1), (x + 1), (x + 3), (x + 5)$

$$\text{Average} = \frac{(x - 5) + (x - 3) + (x - 1) + (x + 1) + (x + 3) + (x + 5)}{6} = 25$$

$$> \frac{6x}{6} = 25$$

$$> x = 25$$

Thus, numbers 20,22,24,26,28,30

If we include the next number, new sum  $150 + 32 = 182$

$$\therefore \text{New average} = \frac{182}{7} = 26$$

> Ans - (C)

Shortcut : Average of six consecutive even numbers 25

> 3rd and 4th numbers are 24 and 26

> Numbers 20,22,24,26,28,30

If we include next number, 20,22,24,26,28,30,32

New average = middle number 26

**Question 113**

There is group of 8 teachers. One teacher leaves the group and a new teacher joins the group. Due to this, the average age of teachers becomes same as the average 2 years ago. If the member who left was aged 42, what is the age (in years) of new teacher ?

- A 22  
B 28  
C 24  
D 26

**Answer:** D

**Explanation:**

Let sum of the ages of 7 teachers (who remain constant)  $7x$  years

$$\text{Average age of the original group} = \frac{7x + 42}{8}$$

$$\text{Thus, average age 2 years ago} = \frac{7x + 42}{8} - 2 \text{ -----(i)}$$

Let age of new teacher  $y$  years

$$\text{Average age of new group} = \frac{7x + y}{8} \text{ -----(ii)}$$

According to ques,

$$> \frac{7x}{8} \cdot 42 - 2 = \frac{7x}{8} \cdot y$$

$$> \frac{7x}{8} \cdot 42 - 16 = \frac{7x}{8} \cdot y$$

$$> y = 42 - 16 = 26$$

∴ Age of new teacher is **26 years**

> Ans - (D)

#### Question 114

A purchased an article and sold it to B at a loss of 20% and B sold it to C at a gain of 20%. C purchases the article for Rs. 480. For what price (in Rs.) A has purchased the article ?

A 500

B 450

C 420

D 480

**Answer: A**

#### Explanation:

Let cost price for A = Rs.  $100x$

Loss % = 20%

$$> \text{Selling price for A} = 100x - \frac{20}{100} \times 100x = \text{Rs. } 80x$$

Thus, cost price for B = Rs.  $80x$

Profit % = 20%

$$> \text{Selling price for B} = 80x + \frac{20}{100} \times 80x = \text{Rs. } 96x$$

Thus, cost price for C = Rs.  $96x$

According to ques,  $96x = 480$

$$> x = \frac{480}{96} = 5$$

∴ A purchased the article for  $100 \times 5 = \text{Rs. } 500$

> Ans - (A)

#### Question 115

20% of cost price is equal to 30% of the selling price. What is the loss per cent ?

A 33.33

B 50

C 20

D 25

**Answer: A**

#### Explanation:

Let cost price Rs.  $x$  and selling price Rs.  $y$

$$> 20\% \text{ of } x = 30\% \text{ of } y$$

$$> 20x = 30y$$

$$> \frac{x}{y} = \frac{3}{2}$$

Let cost price Rs. 3 and selling price Rs. 2

Thus, loss %  $\frac{(x - y)}{x} \times 100$

$$\frac{(3 - 2)}{3} \times 100 = 33.33\%$$

> Ans - (A)

#### Question 116

Salary of A is 20% more than B and salary of B is 18% more than C. The salary of C is (approximately) how much percent less than A ?

A 29.3%

B 32.5%

C 26.7%

D 28.1%

Answer: A

#### Explanation:

Let B's salary Rs. 100

$$> \text{A's salary } 100 + \frac{20}{100} \times 100 = \text{Rs. } 120$$

$$> \text{C's salary } \frac{100}{(100 + 18)} \times 100 \approx \text{Rs. } 84.75$$

$$\therefore \text{Required \% } \frac{(120 - 84.75)}{120} \times 100 = 29.3\%$$

> Ans - (A)

#### Question 117

Price of sugar increases by 30%. If expenditure increases by only 10%, then by how much per cent consumption should decrease ?

A 14.29

B 15.38

C 13.68

D 16.54

Answer: B

#### Explanation:

Let price of sugar Rs. 10/kg and consumption 10 kg

$$> \text{Expense on sugar } \text{Rs. } 100$$

$$\text{New price } \frac{130}{100} \times 10 = \text{Rs. } 13$$

$$\text{New expenditure } \frac{110}{100} \times 100 = \text{Rs. } 110$$

$$> \text{New consumption } \frac{110}{13} = 8.46 \text{ kg}$$

$$\therefore \text{Decrease in consumption } \frac{(10 - 8.46)}{10} \times 100 = 15.4 \approx 15.38\%$$

> Ans - (B)

### Question 118

Amit goes to his office by car at the speed of 80 km/hr and reaches 15 minutes earlier. If he goes at the speed 60 km/hr, he reaches 15 minutes late. What will be the speed (in km/hr) of the car to reach on time ?

A  $66\frac{2}{7}$

B  $67\frac{4}{7}$

C  $68\frac{4}{7}$

D  $69\frac{4}{7}$

Answer: C

### Explanation:

Let ideal time taken to reach on time =  $t$  hours

Speed is inversely proportional to time

$$> \frac{80}{60} = \frac{t + \frac{1}{4}}{t - \frac{1}{4}}$$

$$> 80t - 20 = 60t + 15$$

$$> 80t - 60t = 20t = 15 + 20$$

$$> t = \frac{35}{20} = \frac{7}{4} \text{ hours}$$

Thus, distance covered by going at 60 km/hr and reaching in  $(\frac{7}{4} + \frac{1}{4} = 2)$  hours  $60 \times 2 = 120$  km

$\therefore$  Ideal speed to reach on time  $\frac{120 \times 4}{7} = 68\frac{4}{7}$  km/hr

> Ans - (C)

### Question 119

One third of a certain journey is covered at the speed of 80 km/hr, one fourth of the journey at the speed of 50 km/hr And the rest at the speed of 100 km/hr, what will be the average speed (in km/hr) for the whole journey ?

A 75

B 67

C 66.66

D 76.66

Answer: A

### Explanation:

Let the total distance =  $12x$  km

$$\text{Distance covered at 80 km/hr } \frac{12x}{3} = 4x \text{ km}$$

$$> \text{Time taken } \frac{4x}{80} = \frac{x}{20} \text{ hours}$$

$$\text{Distance covered at 50 km/hr } \frac{12x}{4} = 3x \text{ km}$$

$$> \text{Time taken } \frac{3x}{50} \text{ hours}$$

Distance covered at 100 km/hr  $12x - 4x - 3x = 5x$  km

> Time taken  $\frac{5x}{100} = \frac{x}{20}$  hours

Thus, total time  $\frac{x}{20} + \frac{3x}{50} + \frac{x}{20}$

$$\frac{x}{10} + \frac{3x}{50} = \frac{8x}{50}$$

∴ Average speed = total distance/total time

$$\frac{12x}{\frac{8x}{50}}$$

$$12 \times \frac{50}{8} = 75 \text{ km/hr}$$

> Ans - (A)

### Question 120

What is the compound interest (in Rs.) on a principal sum of Rs. 2800 for 2 years at the rate of 12% per annum?

A 687.18

B 634.46

C 712.32

D 568.68

Answer: C

### Explanation:

Principal sum = Rs. 2800

Rate of interest = 12% and time = 2 years

Compound interest =  $P[(1 + \frac{R}{100})^T - 1]$

$$2800[(1 + \frac{12}{100})^2 - 1]$$

$$2800[(\frac{28}{25})^2 - 1]$$

$$2800 \times (\frac{784}{625} - 1)$$

$$2800 \times \frac{159}{625} = \text{Rs. } 712.32$$

> Ans - (C)

### Question 121

If interest being compound half yearly then what sum (in Rs.) will amount to Rs. 38416 in 2 years at the rate of 80% per annum at compound interest?

A 14000

B 15000

C 10000

D 12000

Answer: C

### Explanation:

Let principal sum = Rs.  $P$  and amount = Rs. 38,416



Rate of interest 80% and time 2 years

Amount if interest being compound half yearly  $P(1 + \frac{R}{200})^{2T}$

$$> P(1 + \frac{80}{200})^{2 \times 2} = 38,416$$

$$> P \times (\frac{7}{5})^4 = 38,416$$

$$> P = 38,416 \times \frac{625}{343 \times 7}$$

$$> P = 16 \times 625 = Rs. 10,000$$

> Ans - (C)

### Instructions

The table given below shows the number of students studying in five colleges in the given five years. Study the table carefully and answer the questions.

Year	College				
	M	N	O	P	Q
2009	450	330	400	500	500
2010	480	380	380	520	520
2011	430	390	440	440	440
2012	480	360	480	490	450
2013	490	340	360	550	550

### Question 122

If in year 2011, in college N 80% of the total students appeared in a exam, out of which 50% students passed, then how many students passed the exam ?

- A 136
- B 152
- C 156
- D 162

Answer: C

### Explanation:

Number of students in college N in 2011 = 390

$$> \text{Number of students who appeared in exam} = \frac{80}{100} \times 390 = 312$$

$$> \text{Number of students who passed the exam} = \frac{50}{100} \times 312 = 156$$

> Ans - (C)

### Question 123

What is the ratio of the total number of students of college N in all years to the total number of students of all the colleges studying in the year 2011 ?

- A 100 : 107
- B 90 : 107
- C 90 : 119
- D 90 : 127

Answer: B

**Explanation:**

Total number of students of college N in all years  $330 + 380 + 390 + 360 + 340 = 1800$

Total number of students of all the colleges studying in the year 2011  $430 + 390 + 440 + 440 + 440 = 2140$

$$> \text{Required ratio} = \frac{1800}{2140} = \frac{90}{107}$$

> Ans - (B)

**Question 124**

What is the average of the total number of students studying in college M in the given years ?

A 412

B 420

C 400

D 466

Answer: D

**Explanation:**

Total number of students studying in college M in the given years  $450 + 480 + 430 + 480 + 490 = 2330$

$$> \text{Required average} = \frac{2330}{5} = 466$$

> Ans - (D)

**Question 125**

In which of the given years the average number of students studying is maximum ?

A 2011

B 2009

C 2010

D 2013

Answer: D

**Explanation:**

Number of students studying in the year :

(A) : 2011  $430 + 390 + 440 + 440 + 440 = 2140$

(B) : 2009  $450 + 330 + 400 + 500 + 500 = 2180$

(C) : 2010  $480 + 380 + 380 + 520 + 520 = 2280$

(D) : 2013  $490 + 340 + 360 + 550 + 550 = 2290$  [MAX]

> Ans - (D)

**Instructions**

For the following questions answer them individually

**Question 126**

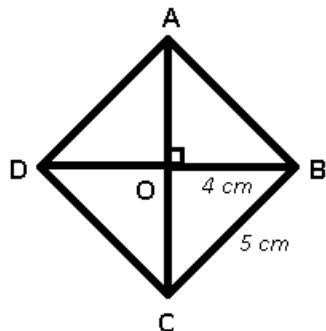
The perimeter of a rhombus is 20 cm and one of the diagonal is 8 cm. What is the area (in  $cm^2$ ) of the rhombus?

A 12

- B 24  
C 48  
D 96

Answer: B

Explanation:



Given : ABCD is the rhombus whose diagonals bisect at O and the diagonals of a rhombus bisect each other at right angle.  $BD = 8 \text{ cm}$

$$\Rightarrow OB = 4 \text{ cm}$$

Perimeter of rhombus = 20 cm

$$\Rightarrow BC = \frac{20}{4} = 5 \text{ cm}$$

Thus, in  $\triangle BOC$ ,

$$\Rightarrow (OC)^2 = (BC)^2 - (OB)^2$$

$$\Rightarrow (OC)^2 = (5)^2 - (4)^2$$

$$\Rightarrow (OC)^2 = 25 - 16 = 9$$

$$\Rightarrow OC = \sqrt{9} = 3 \text{ cm}$$

Thus,  $AC = 6 \text{ cm}$  and  $BD = 8 \text{ cm}$

$\therefore$  Area of rhombus =  $\frac{1}{2} \times d_1 \times d_2$

$$\frac{1}{2} \times 6 \times 8 = 24 \text{ cm}^2$$

$\Rightarrow$  Ans - (B)

#### Question 127

Three circles of radius 9 cm are kept touching each other. The string is tightly tied around the three circles. What is the length (in cm.) of the string ?

- A  $48 + 18\pi$   
B  $48 + 24\pi$   
C  $54 + 18\pi$   
D  $54 + 24\pi$

Answer: C

#### Question 128

The difference between circumference and the radius of a circle is 111 cm. What is the area (in  $\text{cm}^2$ ) of the circle?

- A 469

- B 1386  
C 912  
D 1086

**Answer: B**

**Explanation:**

Let radius of circle =  $r$  cm

$$2\pi r - r = 111$$

$$r(2 \times \frac{22}{7} - 1) = 111$$

$$r \times \frac{44}{7} - r = 111$$

$$r = 111 \times \frac{7}{37} = 21 \text{ cm}$$

$\therefore$  Area of circle =  $\pi r^2$

$$\frac{22}{7} \times (21)^2 = 1386 \text{ cm}^2$$

> Ans - (B)

**Question 129**

If the diameter of a sphere is 14 cm., then what is the curved surface area (in  $\text{cm}^2$ ) of the sphere?

- A 616  
B 1232  
C 2464  
D 576

**Answer: A**

**Explanation:**

Radius of sphere = 7 cm

Curved surface area =  $4\pi r^2$

$$4 \times \frac{22}{7} \times (7)^2 = 616 \text{ cm}^2$$

> Ans - (A)

**Question 130**

If the ratio of volume of two cubes is 11 : 13, then what is the ratio of the sides of the two cubes ?

- A 11 : 13  
B 121 : 169  
C  $(11)^{\frac{1}{2}} : (13)^{\frac{1}{2}}$   
D  $(11)^{\frac{1}{3}} : (13)^{\frac{1}{3}}$

**Answer: D**

**Explanation:**

Let side of the two cubes be  $a$  and  $b$  units respectively

Ratio of volumes  $\frac{a^3}{b^3} = \frac{11}{13}$

$$> \frac{a}{b} = \left(\sqrt[3]{\frac{11}{13}}\right)$$

$$> \frac{a}{b} = (11)^{\frac{1}{3}} : (13)^{\frac{1}{3}}$$

> Ans - (D)

### Question 131

If  $x = 17 - 4\sqrt{18}$ , then find the value of  $(\sqrt{x} + \frac{1}{\sqrt{x}})$  ?

A  $7\sqrt{2}$

B 9

C 22

D 6

Answer: D

### Explanation:

Expression :  $x = 17 - 4\sqrt{18}$

$$> x = 17 - 2\sqrt{72}$$

$$> x = (\sqrt{9})^2 + (\sqrt{8})^2 + 2(\sqrt{9})(\sqrt{8})$$

Using,  $a^2 + b^2 + 2ab = (a + b)^2$

$$> x = (\sqrt{9} + \sqrt{8})^2$$

$$> \sqrt{x} = 3 + 2\sqrt{2} \text{ -----(i)}$$

Also,  $\frac{1}{\sqrt{x}} = 3 - 2\sqrt{2}$

Rationalizing the denominator, we get :

$$> \frac{1}{\sqrt{x}} = \frac{1}{3 + 2\sqrt{2}} \times \frac{3 - 2\sqrt{2}}{3 - 2\sqrt{2}}$$

$$> \frac{1}{\sqrt{x}} = \frac{3 - 2\sqrt{2}}{9 - 8}$$

$$> \frac{1}{\sqrt{x}} = 3 - 2\sqrt{2} \text{ -----(ii)}$$

Adding equation (i) and (ii),

$$\therefore (\sqrt{x} + \frac{1}{\sqrt{x}}) = (3 + 2\sqrt{2}) + (3 - 2\sqrt{2}) = 6$$

> Ans - (D)

### Question 132

If  $a^2 + b^2 + c^2 + \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} = 6$ , then what is the value of  $(a^2 + b^2 + c^2)$  ?

A 3

B 6

C -3

D 2

Answer: A

**Explanation:**

$$\text{Given : } a^2 + b^2 + c^2 + \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} = 6$$

$$> (a^2 + \frac{1}{a^2} - 2) + (b^2 + \frac{1}{b^2} - 2) + (c^2 + \frac{1}{c^2} - 2) = 0$$

$$> (a - \frac{1}{a})^2 + (b - \frac{1}{b})^2 + (c - \frac{1}{c})^2 = 0$$

∴ Sum of three positive terms is zero, hence each term is equal to 0.

$$> (a - \frac{1}{a}) = (b - \frac{1}{b}) = (c - \frac{1}{c}) = 0$$

$$> \frac{a^2 - 1}{a} = 0$$

$$> a^2 = 1$$

Similarly,  $b^2 = c^2 = 1$

$$\therefore (a^2 + b^2 + c^2) = 1 + 1 + 1 = 3$$

> Ans - (A)

**Question 133**

If  $(3x^2 - 9x + 3) = 0$ , then what is the value of  $(x + \frac{1}{x})^3$ ?

A 9

B 729

C 81

D 27

Answer: D

**Explanation:**

$$\text{Given : } (3x^2 - 9x + 3) = 0$$

$$> (3x^2 + 3) = 9x$$

Dividing both sides by '3x', we get :

$$> x + \frac{1}{x} = 3 \text{ -----(i)}$$

Cubing both sides,

$$> (x + \frac{1}{x})^3 = (3)^3$$

$$> (x + \frac{1}{x})^3 = 27$$

> Ans - (D)

**Question 134**

If  $(x - \frac{1}{x}) = 3$ , then what is the value of  $(x^3 - \frac{1}{x^3})$ ?

A 36

B 21

C 9

D 27

**Answer: A**

**Explanation:**

Given :  $(x - \frac{1}{x}) = 3$  -----(i)

Cubing both sides, we get :

$$> (x - \frac{1}{x})^3 = (3)^3$$

$$> x^3 - \frac{1}{x^3} - 3(x)(\frac{1}{x})(x - \frac{1}{x}) = 27$$

$$> x^3 - \frac{1}{x^3} - 3(1)(3) = 27$$

$$> (x^3 - \frac{1}{x^3}) = 27 + 9 = 36$$

> Ans - (A)

**Question 135**

If  $x^2 - 9x - 1 = 0$ , then what is the value of  $(x^2 - \frac{1}{x^2} + 5x - \frac{5}{x})$  ?

**A** 115

**B** 128

**C** 124

**D** 133

**Answer: B**

**Explanation:**

Given :  $x^2 - 9x - 1 = 0$

$$> x^2 - 1 = 9x$$

Dividing both sides by 'x',

$$> x - \frac{1}{x} = 9$$
 -----(i)

Squaring both sides, we get :

$$> (x - \frac{1}{x})^2 = (9)^2$$

$$> x^2 - \frac{1}{x^2} - 2(x)(\frac{1}{x}) = 81$$

$$> x^2 - \frac{1}{x^2} = 81 + 2 = 83$$
 -----(ii)

$$\therefore (x^2 - \frac{1}{x^2} + 5x - \frac{5}{x})$$

$$(x^2 - \frac{1}{x^2}) + 5(x - \frac{1}{x})$$

Substituting values from equation (i) and (ii),

$$83 + 5(9) = 128$$

> Ans - (B)

**Question 136**

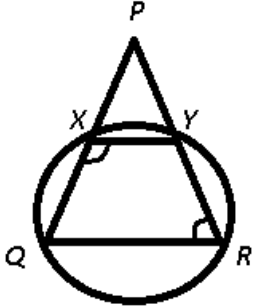
A circle passing through points Q and R of triangle PQR, cuts the sides PQ and PR at points X and Y respectively. If PQ = PR, then what is the value (in degrees) of  $\angle PRQ + \angle QXY$  ?

**A** 120

- B 150  
C 240  
D 180

Answer: D

Explanation:



Given : PQR is an isosceles triangle,  $PQ = PR$

To find :  $\angle PRQ + \angle QXY$  ?

Solution : Since,  $\triangle PQR$  is isosceles, we have  $\angle Q = \angle R$

Now, XY is parallel to QR, and sum of angles on the same side of transversal is supplementary,  $\therefore \angle PQR + \angle QXY = 180^\circ$

$$\therefore \angle PRQ + \angle QXY = 180^\circ$$

II method : XYRQ is a cyclic quadrilateral and opposite angles in a cyclic quadrilateral are supplementary.

$\therefore$  Ans - (D)

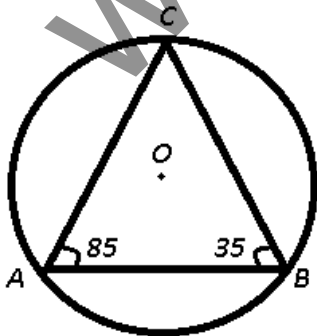
#### Question 137

A, B and C are the three points on a circle such that  $\angle ABC = 35^\circ$  and  $\angle BAC = 85^\circ$ . What is the angle (in degrees) subtended by arc AB at the center of the circle?

- A 60  
B 90  
C 135  
D 120

Answer: D

Explanation:



Given :  $\angle ABC = 35^\circ$  and  $\angle BAC = 85^\circ$

To find :  $\angle AOB$  ?

Solution : In triangle, ABC



$$> \angle A + \angle B + \angle C = 180^\circ$$

$$> 85^\circ + 35^\circ + \angle C = 180^\circ$$

$$> \angle C = 180^\circ - 120^\circ = 60^\circ$$

Now, angle subtended by an arc at the centre is double the angle subtended by it at any point on the circle.

$$> \angle AOB = 2 \times \angle ACB$$

$$2 \times 60^\circ = 120^\circ$$

> Ans - (D)

### Question 138

In  $\triangle PQR$ , S and T are the mid points of sides PQ and PR respectively. If  $\angle QPR = 45^\circ$  and  $\angle PRQ = 55^\circ$ , then what is the value (in degrees) of  $\angle QST$  ?

A 80

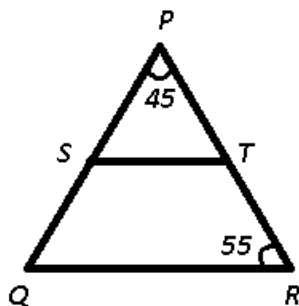
B 85

C 90

D 100

Answer: D

Explanation:



Given :  $\angle QPR = 45^\circ$  and  $\angle PRQ = 55^\circ$

To find :  $\angle QST$  ?

Solution : In triangle, PQR

$$> \angle P + \angle Q + \angle R = 180^\circ$$

$$> 45^\circ + 55^\circ + \angle Q = 180^\circ$$

$$> \angle Q = 180^\circ - 100^\circ = 80^\circ$$

Now, since ST divides PQ and PR equally, thus ST is parallel to QR.

$\therefore$  Angles on the same side of transversal are supplementary,  $> \angle PQR + \angle QST = 180^\circ$

$$> \angle QST = 180^\circ - 80^\circ = 100^\circ$$

> Ans - (D)

### Question 139

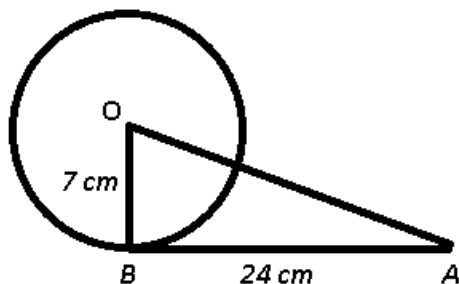
AB is a tangent to a circle with centre O. If the radius at the circle is 7 cm and the length of AB is 24 cm, the what is the length (in cm.) of OA ?

A 25

- B 26  
C 28  
D 31

Answer: A

Explanation:



Given : OB is radius of circle = 7 cm and tangent AB = 24 cm

To find : OA = ?

Solution : The radius of a circle intersects the tangent at right angle,  $\therefore \angle OBA = 90^\circ$

Thus in  $\triangle OAB$ ,

$$> (OA)^2 = (OB)^2 + (AB)^2$$

$$> (OA)^2 = (7)^2 + (24)^2$$

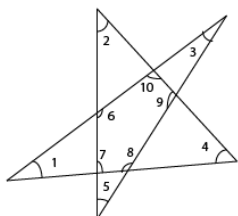
$$> (OA)^2 = 49 + 576 = 625$$

$$> OA = \sqrt{625} = 25 \text{ cm}$$

> Ans - (A)

Question 140

In the given figure, what is the value of  $\angle 1 + \angle 2 + \angle 3 + \angle 4 + \angle 5 + \angle 6 + \angle 7 + \angle 8 + \angle 9 + \angle 10$ ?



- A 600  
B 720  
C 900  
D 1080

Answer: B

Question 141

What is the value of  $\frac{(\tan^2 x + \sec^2 x)}{\sec^2 x}$  ?

A  $\sin^4 x$

B  $\cos^2 x$

C  $\sin^2 x$

D  $\cos^4 x$

Answer: A

Explanation:

$$\text{Expression: } \frac{(\tan^2 x \cdot \sin^2 x)}{\sec^2 x}$$

$$\frac{\left(\frac{\sin^2 x}{\cos^2 x} \cdot \sin^2 x\right)}{\sec^2 x}$$

$$\frac{\sin^2 x}{\sec^2 x} (\frac{1}{\cos^2 x} - 1)$$

$$\sin^2 x \cos^2 x (\frac{1}{\cos^2 x} - 1)$$

$$\sin^2 x \times (\sin^2 x) = \sin^4 x$$

> Ans - (A)

Question 142

If  $\sin x = \frac{1}{2}$  and  $\cos y = \frac{1}{2}$ , what is the value of  $\sin(x+y)$ ?

A  $\frac{2}{3}$

B  $\frac{4}{9}$

C  $\frac{5}{9}$

D 1

Answer: D

Explanation:

$$\text{Given: } \sin x = \frac{1}{2} \text{ and } \cos y = \frac{1}{2}$$

$$> \sin(x) = \sin(30^\circ)$$

$$> x = 30^\circ$$

$$\text{Similarly, } > \cos(y) = \cos(60^\circ)$$

$$> y = 60^\circ$$

$$\therefore \sin(x+y)$$

$$\sin(30^\circ + 60^\circ) = \sin(90^\circ) = 1$$

> Ans - (D)

Question 143

What is the value of  $\frac{\cos x \cos y}{\sin x \sin y}$  ?

A  $\tan^{\frac{x}{2}} \frac{y}{2}$

B  $\tan^{\frac{x}{2}} \frac{y}{2}$

C  $\cot^{\frac{x}{2}} \frac{y}{2}$

D  $\cot \frac{x+y}{2}$

Answer: D

Explanation:

Expression :  $\frac{\cos x \cos y}{\sin x \sin y}$

$$\frac{\cos\left(\frac{x+y}{2}\right)\cos\left(\frac{x+y}{2}\right)}{\sin\left(\frac{x+y}{2}\right)\cos\left(\frac{x+y}{2}\right)}$$

$$\frac{\cos\left(\frac{x+y}{2}\right)}{\sin\left(\frac{x+y}{2}\right)}$$

$$\cot\left(\frac{x+y}{2}\right)$$

> Ans - (D)

Question 144

What is the value of  $\sec 12^\circ \sin 12^\circ \tan 38^\circ \tan 78^\circ \tan 52^\circ$ ?

A 1

B 3

C  $\frac{1}{2}$

D  $\frac{3}{2}$

Answer: A

Explanation:

Expression :  $\sec 12^\circ \sin 12^\circ \tan 38^\circ \tan 78^\circ \tan 52^\circ$

$$\frac{1}{\cos(12^\circ)} \cdot \sin(12^\circ) \cdot \tan(38^\circ) \cdot \tan(78^\circ) \cdot \tan(52^\circ)$$

$$[\tan(12^\circ) \cdot \tan(78^\circ)] \cdot [\tan(38^\circ) \cdot \tan(52^\circ)]$$

Using,  $\tan(90^\circ - \theta) = \cot(\theta)$

$$[\tan(12^\circ) \cdot \cot(12^\circ)] \cdot [\tan(38^\circ) \cdot \cot(38^\circ)]$$

Also,  $\tan(\theta) \cot(\theta) = 1$

$$1 \times 1 = 1$$

> Ans - (A)

Question 145

Find the value of  $\frac{(\cot \theta \operatorname{cosec} \theta + 1)(\tan \theta \sec \theta + 1)}{\cos \theta \operatorname{cosec} \theta}$  ?

A  $2 \cos \theta$

B 2

C  $2 \cot \theta$

D  $2 \tan \theta$

Answer: D

Explanation:

$$\text{Expression : } \frac{(\cot\theta \operatorname{cosec}\theta - 1)(\tan\theta \sec\theta - 1)}{\cos\theta \operatorname{cosec}\theta}$$

$$\frac{\sin\theta}{\cos\theta} \times \left[ \left( \frac{\cos\theta}{\sin\theta} - \frac{1}{\sin\theta} + 1 \right) \times \left( \frac{\sin\theta}{\cos\theta} + \frac{1}{\cos\theta} + 1 \right) \right]$$

$$\frac{\sin\theta}{\cos\theta} \times \left[ \left( \frac{\cos\theta - \sin\theta + 1}{\sin\theta} \right) \times \left( \frac{\cos\theta + \sin\theta + 1}{\cos\theta} \right) \right]$$

Using,  $(x - y)(x + y) = x^2 - y^2$ , where  $x = \cos\theta + \sin\theta$  and  $y = 1$

$$\frac{1}{\cos^2\theta} \times [(\cos\theta + \sin\theta)^2 - (1)^2]$$

$$\frac{1}{\cos^2\theta} \times [\cos^2\theta + \sin^2\theta + 2\cos\theta \cdot \sin\theta - 1]$$

$$\frac{1}{\cos^2\theta} \times [1 + 2\cos\theta \cdot \sin\theta - 1]$$

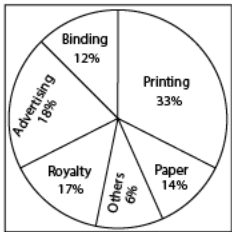
$$\frac{1}{\cos^2\theta} \times (2\cos\theta \cdot \sin\theta)$$

$$\frac{2\sin\theta}{\cos\theta} = 2\tan\theta$$

> Ans - (D)

### Instructions

The given pie-chart shows the various expenses (in per cent) incurred by publisher on publishing a book.



### Question 146

If the total amount spent on publishing the book is Rs. 68000, then what will be the amount (in Rs.) spent on Advertising ?

- A 11560
- B 12240
- C 9520
- D 8160

Answer: B

### Explanation:

Total amount spent on publishing the book = Rs. 68000

> Amount (in Rs.) spent on Advertising =  $\frac{18}{100} \times 68000$

$$18 \times 680 = \text{Rs. } 12,240$$

> Ans - (B)

### Question 147

If the amount spent on Binding is Rs. 14400, then what will be the amount (in Rs.) spent on Paper ?

- A 7200
- B 20400
- C 15600

D 16800

**Answer:** D

**Explanation:**

Amount spent on binding  $12\% \equiv Rs. 14,400$

> Amount (in Rs.) spent on Paper (14%)  $14 \times \frac{14400}{12}$

$14 \times 1200 = Rs. 16,800$

> Ans - (D)

**Question 148**

**By how much per cent the total amount spent on Paper and Binding is less than the amount spent on Printing ?**

A 21.21%

B 45.45%

C 30.3%

D 33.33%

**Answer:** A

**Explanation:**

% spent on Paper and Binding  $(14+12)\% = 26\%$

% spent on Printing  $33\%$

> Required %  $\frac{(33 - 26)}{33} \times 100$

$\frac{700}{33} = 21.21\%$

> Ans - (A)

**Question 149**

**By how much the average amount spent on Printing and Royalty is more (in Rs) than the average amount spent. Total amount spent on Publication is Rs. 150000 ?**

A 12500

B 10000

C 7500

D 9000

**Answer:** A

**Explanation:**

Total amount spent on Publication  $Rs. 1,50,000$

> Average spent  $\frac{1,50,000}{6} = Rs. 25,000$

Average % spent on Printing and Royalty  $\frac{33 + 17}{2} = 25\%$

> Average amount spent on Printing and Royalty  $\frac{25}{100} \times 1,50,000 = Rs. 37,500$

$\therefore$  Required difference  $37,500 - 25,000 = Rs. 12,500$

> Ans - (A)

**Question 150**

For 11000 books the expenses incurred on others is Rs. 36960. If publisher wants a profit of 25%, then what should be the marked price (in Rs.) of each book ?

- A 56
- B 76
- C 70
- D 50

**Answer:** C

**Explanation:**

Amount spent on others for 11000 books  $6\% \equiv Rs. 36,960$

> Total amount spent on publishing 11000 books  $100 \times \frac{36960}{6}$

$$100 \times 6160 = Rs. 6,16,000$$

> Amount spent on each book  $\frac{6,16,000}{11000} = Rs. 56$

$\therefore$  To get 25% profit, marked price of each book  $56 + \left(\frac{25}{100} \times 56\right)$

$$56 + 14 = Rs. 70$$

> Ans - (C)

**English****Instructions**

In the following questions, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'

**Question 151**

- A Three lakhs of people
- B attended the workshop
- C held in Ramleela ground
- D No Error

**Answer:** A

**Question 152**

- A Ayesha is among the few people
- B in the office which did not

C blindly follow the path of other.

D No Error

**Answer: B**

**Question 153**

A I would

B rather to

C die than beg

D No Error

**Answer: B**

**Question 154**

A Ankit can not

B succeed because

C he labours hard

D No Error

**Answer: D**

**Question 155**

A The teacher

B explained everything

C very clearly

D No Error

**Answer: D**

**Instructions**

In the following questions, the sentence given with blank is to be filled in with an appropriate word. Select the correct alternative out of the four.

**Question 156**

Hundreds of \_\_\_\_\_ have been used in the study of the past and of man's progress.

A stories

B tales

C methods

D motions

**Answer: C**



**Question 157**

Computer literacy will be crucial in \_\_\_\_ children to cope with the overall advancement.

- A teaching
- B negotiating
- C separating
- D encouraging

**Answer: A**

**Question 158**

Vishal couldn't \_\_\_\_\_ breakfast today.

- A had
- B have been
- C have
- D having

**Answer: C**

**Question 159**

One of the pens \_\_\_\_ no ink.

- A has
- B have
- C is
- D are

**Answer: A**

**Question 160**

This is the same dog \_\_\_\_ was running on the road.

- A whom
- B who
- C which
- D that

**Answer: C**

**Instructions**

In the following questions, out of the four alternatives, select the word similar in meaning to the word given.

**Question 161****Ablaze**

- A cool
- B furious
- C restore
- D prolong

**Answer: B**

**Question 162****Chivalrous**

- A heroic
- B abhorrent
- C doleful
- D rude

**Answer: A**

**Question 163****Concocted**

- A certain
- B sensitive
- C pathetic
- D dubious

**Answer: D**

**Question 164****Gambol**

- A brittle
- B frisk
- C shallow
- D work

**Answer: B**

**Question 165****Jungle**

- A quite
- B flatter
- C disagree
- D spongy

**Answer: C**

**Instructions**

In the following questions, out o the four alternatives, select the word opposite in meaning to the word given.

**Question 166****Keen**

- A meek
- B sharp
- C preserve
- D dull

**Answer: D**

**Question 167****Loiter**

- A wander
- B punctual
- C sober
- D free

**Answer: B**

**Question 168****Maden**

- A calm
- B enrage
- C sordid
- D fussy

**Answer: A**

**Question 169****Penitence**

- A sterile
- B approval
- C deter
- D remorse

**Answer: B**

**Question 170****Slacken**

- A rejoice
- B increase
- C flimsy
- D abate

**Answer: B**

**Instructions**

In the following questions, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

**Question 171****A dark horse**

- A no longer in use
- B self-possessed
- C a competitor of unknown capabilities
- D an unfortunate person

**Answer: C**

**Question 172****All at sea**

- A completely confused
- B in great trouble
- C rise and fall
- D in spite of

**Answer: A**

**Question 173****Bear up with**

- A endure
- B deceit
- C uncertain
- D colloquial

**Answer: A****Question 174****Creature comforts**

- A hint
- B luxuries
- C support
- D avoid

**Answer: B****Question 175****To clear the decks**

- A throw the challenge
- B to remove abstractions
- C to remove obstructions
- D control one's anger

**Answer: C****Instructions**

Improve the bracketed part of each sentence.

**Question 176****The red and (the white rose) looks beautiful**

- A white rose
- B a white rose
- C an white rose
- D No improvement

**Answer: A**

**Question 177**

I (have seen) him last year

- A had seen
- B am seeing
- C saw
- D No improvement

**Answer: C**

**Question 178**

Shashank appealed to the judge (for his release) from jail.

- A of his release
- B from his release
- C his release
- D No improvement

**Answer: D**

**Question 179**

Rohan has no acquaintance (from Sourabh).

- A of
- B on
- C with
- D No improvement

**Answer: C**

**Question 180**

His mother has been ill (for) five days ago.

- A since
- B of
- C from
- D No improvement

**Answer: D**

**Instructions**

In the following questions, out of the four alternatives, select the alternative which is the best substitute of the phrase.

**Question 181**

**Shamelessly rude**

- A imbecile
- B impudent
- C infallible
- D invincible

**Answer: B**

**Question 182**

**A place for invalids and convalescents**

- A hermit
- B vacuous
- C sanatorium
- D dormitory

**Answer: C**

**Question 183**

**A person who is fond of fighting**

- A bellicose
- B sinecure
- C deserter
- D pedant

**Answer: A**

**Question 184**

**Story told to illustrate a moral or spiritual truth**

- A nubile
- B elegy
- C parable
- D ode

**Answer: C**

**Question 185**

The policy of extending a country's empire and influence

- A debauchery
- B parchment
- C denigration
- D imperialism

**Answer: D**

**Instructions**

In the following questions, four words are given out of which one word is incorrectly spelt. Select the incorrectly spelt word.

**Question 186**

- A mentering
- B beginning
- C challenging
- D inviting

**Answer: A**

**Question 187**

- A pleasant
- B maximum
- C homorous
- D inferior

**Answer: C**

**Question 188**

- A frequent
- B furioes
- C ferocious
- D fabulous

**Answer: B**

**Question 189**

- A apparently
- B aggressive



C ambassador

D attention

**Answer: A**

**Question 190**

A mercenary

B magnanimous

C wakeful

D melancholy

**Answer: B**

**Instructions**

In the following passage some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

Life priorities and (191) are never going to reduce. But among all of them, make some time for (192) the well being of the environment you live in. To save our environment, (193) life changing movement, is required. If anything is required, that is will power, honest (194) and some small initiatives. Save our environment by being a responsible citizens. Teach your child and others to save water. Do not waste water It s a very (195) element of our environment.

**Question 191**

A dreams

B ambitions

C passions

D necessities

**Answer: D**

**Question 192**

A ensuring

B resulting

C developing

D enarging

**Answer: A**

**Question 193**

A Some

B huge

C no

D sufficient

**Answer: C**

#### Question 194

A assurance

B factor

C working

D inclination

**Answer: A**

#### Question 195

A contradictory

B precious

C healthy

D bulky

**Answer: B**

#### Instructions

A passage is given with five questions following it. Read the passage carefully and select the best answer to each question out of the given four alternatives.

Culture is defined as a people's way of life. It entails how they dress, how they speak, the type of food they eat, the manner in which they worship, and their art among many other things.

Indian culture, therefore, is the Indian's way of life. Because of the population diversity, there is immense variety in Indian culture. The Indian culture is a blend of various cultures in the world. India had an urban civilization even during the Bronze age. The Indus Valley Civilization (Harappan Civilization) dates back to 3300 BC - 1300 BC. Distinct cultures different from each other co-exist together in a single country. Thus, in India, there is unity amidst vast cultural diversity. The way people live in India is reflected in its culture.

Unity in Diversity: India is a land of unity in diversity where people of different sects, caste and religion live together. India is also called the land of unity in diversity as different groups of people co-operate with each other to live in a single society. Unity in diversity has also become the strength of India.

Secularism: The word secularism means equality, impartiality, etc, towards all religion. India is a secular country, which means, equal treatment of all the religions present in India.

Traditions: traditional cultural values

1) Touching feet of elders: Indian tradition has rich cultural values. In India, younger show great respect to their elders. They touch the feet of their elders daily after waking up and especially on the festive occasions or before starting an important work.

2) Namaste: The gesture of the Namaste greeting is also part of the Indian culture. People greet each other by saying "Namaste" while joining their hands. "Namaste means "Hello". (Also read. The meaning of Namaste here.)

3) Most Indians have a habit of shaking their heads while talking.

#### Question 196

**If I am a cultural, well-behaved Indian, what won't do ?**

A Touch the feets of the elders.

B Join my hands while doing 'Namaste .

- C Wake up early in the morning, especially on the festive occasions.
- D Shake my head as a habit while talking.

**Answer:** C

#### Question 197

**Why is India called a unity in diversity ?**

- A Different groups of people co-operate with each other.
- B People of different sects, caste and religion live together.
- C It is strength of India.
- D All of these

**Answer:** D

#### Question 198

**Which of the following is not true according to the passage ?**

- A Culture entails how people dress.
- B Culture entails how people speak.
- C Culture entails how people worship.
- D Culture entails what drawing people draw.

**Answer:** D

#### Question 199

**Based on the above passage, which of the following is NOT true about Indian culture ?**

- A Indian culture dates back to 3800 BC - 1300 BC
- B Every religion follows their own tradition and customs.
- C Every religion is treated equally in India.
- D In India there is unity in diversity.

**Answer:** B

#### Question 200

**What is the reason behind the immense variety in Indian culture ?**

- A Blend of various cultures
- B Population diversity

C Cultural diversity

D Secularism

**Answer: B**

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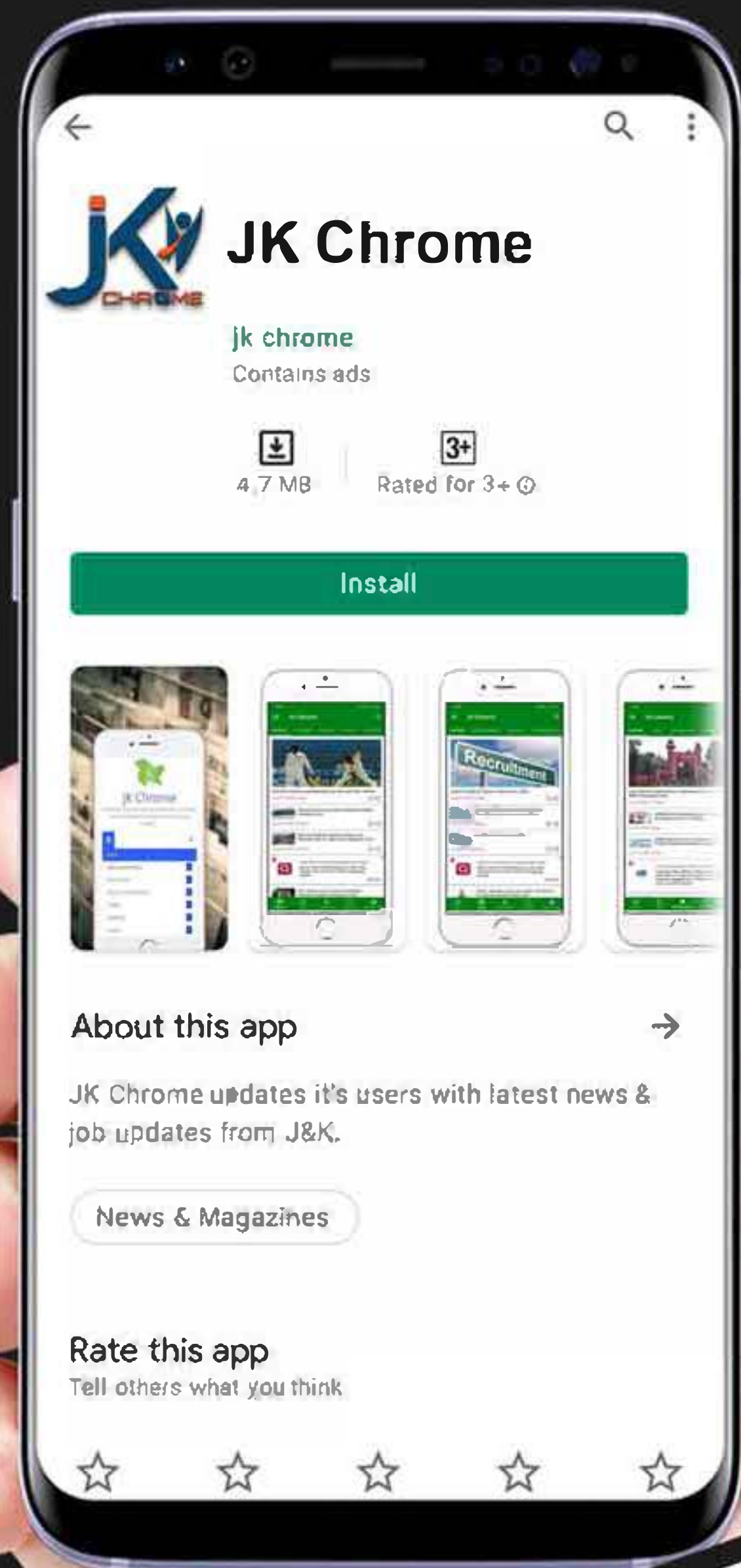
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