

Reasoning

Instructions

For the following questions answer them individually

Question 1

Astronomy: Star::Geology:?

- A Sky
- B Geometry
- C Science
- D Earth

Answer: D

Explanation:

Expression = Astronomy: Star::Geology:?

Astronomy is the study of stars, similarly Geology is the study of **Earth**.

=> Ans - (D)

Question 2

Up:Down::Back:?

- A Left
- B Deep
- C Front
- D Right

Answer: C

Explanation:

Expression = Up:Down::Back:?

The given pairs are antonyms, i.e. up is the opposite of down, similarly opposite of back is **front**.

=> Ans - (C)

Question 3

If $4 \times 2 \times 6 = 1626$, $3 \times 7 \times 4 = 974$, then $5 \times 6 \times 8 = ?$

- A 3658
- B 2568
- C 5664
- D 6456

Answer: B

Explanation:

The pattern followed is that for the numbers : $a \times b \times c = a^2bc$

Eg :- $4 \times 2 \times 6 = (4)^2 26 = 1626$

and $3 \times 7 \times 4 = (3)^2 74 = 974$

Similarly, $5 \times 6 \times 8 = (5)^2 68 = 2568$

=> Ans - (B)

Instructions

In the following question, find the odd word from the given alternatives.

Question 4

A Madam

B Animal

C Othello

D Noun

Answer: D

Explanation:

Madam, Othello and animal are all different nouns, hence **noun** is the odd one out.

=> Ans - (D)

Question 5

A 5:25

B 8:64

C 7:49

D 6:30

Answer: D

Explanation:

(A) : $(5)^2 = 25$

(B) : $(8)^2 = 64$

(C) : $(7)^2 = 49$

(D) : $(6)^2 = 36 \neq 30$

=> Ans - (D)

Question 6

A 245

B 443

C 633

D 821

Answer: C

Explanation:

The sum of digits of each number is

(A) : $2 + 4 + 5 = 11$

(B) : $4 + 4 + 3 = 11$

(C) : $6 + 3 + 3 = 12 = 11$

(D) : $8 + 2 + 1 = 11$

=> Ans - (C)

Question 7

A Green gram

B Corn

C Barley

D Wheat

Answer: A

Explanation:

Except green gram all others are cereals

Instructions

For the following questions answer them individually

Question 8

Which group of letters when sequentially placed at the gaps in the given letter series shall complete it?

A E _ F C G _ H _ I F J _ K

A bdeg

B debg

C eegb

D bcad

Answer: A

Explanation:

in the alphabetical series that is ABCDEFGHIJKLMNOPQRSTUVWXYZ

after every letter the third letter to it is placed before it i.e

A E B F C G D H E I F J G K

making option A the correct answer

Question 9

Arrange the following words as per order in dictionary.

1. Obscure

2. Objective

3. Objection

4. Obligation

5. Oblivion

A 3,2,4,5,1

B 3,2,5,4,1

C 3,2,5,1,4

D 5,2,1,3,4

Answer: A

Explanation:

As per the order of dictionary,

= Objection -> Objective -> Obligation -> Oblivion -> Obscure

≡ 3,2,4,5,1

=> Ans - (A)

Question 10

15,23,31,39,___,55,63

A 45

B 47

C 46

D 44

Answer: B

Explanation:

The pattern followed is:

$$15 + 8 = 23$$

$$23 + 8 = 31$$

$$31 + 8 = 39$$

$$39 + 8 = 47$$

$$47 + 8 = 55$$

$$55 + 8 = 63$$

=> Ans - (B)

Question 11

2, 3.5, 5, 6.5, 8, ___?

A 9.0

B 9.5

C 10.5

D 11.0

Answer: B

Explanation:

The pattern followed here is $(n + 1.5)$

$$2 + 1.5 = 3.5,$$

$$3.5 + 1.5 = 5,$$

$$5 + 1.5 = 6.5,$$

$$6.5 + 1.5 = 8,$$

$$8 + 1.5 = 9.5$$

Hence, option B is the correct answer.

Question 12

32,58,92,134,___?

A 169

B 184

C 194

D 156

Answer: B

Explanation:

Hence, option B is the correct answer.

Question 13

From the given alternative words, select the word which cannot be formed using the letters of the given word: INTERROGATE (multiple use of letters are allowed)

A GATE

B SIGNATURE

C INTERN

D TERROR

Answer: B

Explanation:

The word 'INTERROGATE' does not contain any 'S', thus the word **Signature** cannot be formed.

=> Ans - (B)

Question 14

If PAINT is coded as 74128 and EXCEL is coded as 93596.how is ACCEPT coded?

A 459578

B 457958

C 459758

D 455978

Answer: D

Explanation:

P - 7

A - 4

I - 1

N - 2

T - 8

E - 9

X - 3

C - 5

E - 9

L - 6

The codes for each letter is given :

A ->4

C ->5

C ->5

E ->9

P ->7

T ->8

=> ACCEPT : 455978

=> Ans - (D)

Question 15

If '+' means ' \div ', 'x' means '+', '-' means 'x' and ' \div ' means '-' then which of the following equations is correct ?

A $36 + 6 - 3 \times 2 = 20$

B $36 \times 6 + 3 - 2 < 20$

C $36 \times 6 + 3 \times 2 < 20$

D $36 + 6 \times 3 + 2 = 20$

Answer: A

Explanation:

(A) : $36 + 6 - 3 \times 2 = 20$

$\equiv 36 \div 6 \times 3 + 2 = 20$

L.H.S. = $(\overset{36}{6} \times 3) + 2$

= $(6 \times 3) + 2 = 20 = \text{R.H.S.}$

=> Ans - (A)

Question 16

A father is 5 times as old as his son. His son is 6 year old. After how many years, will the father be 4 times as old as his son ?

A 2 years

B 5 years

C 6 years

D 4 years

Answer: A

Explanation:

Son's age = 6 years

=> Father's age = $5 \times 6 = 30$ years

Let after X years, father will be four times as old as his son.

$$\Rightarrow (30 + x) = 4(6 + x)$$

$$\Rightarrow 30 + x = 24 + 4x$$

$$\Rightarrow 4x - x = 30 - 24$$

$$\Rightarrow 3x = 6$$

$$\Rightarrow x = \frac{6}{3} = 2$$

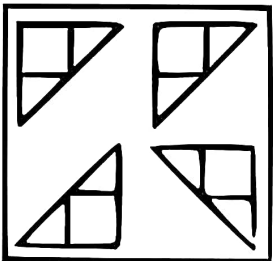
\therefore After 2 years, father will be four times as old as his son.

=> Ans - (A)

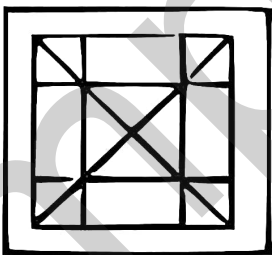
Instructions

Among the four question figures, which figure can be formed from the cut-pieces given below in the question figure ?

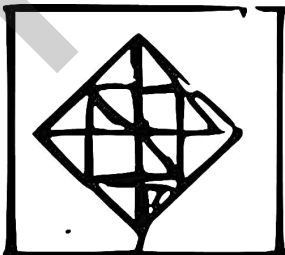
Question 17

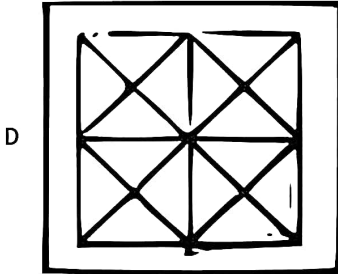
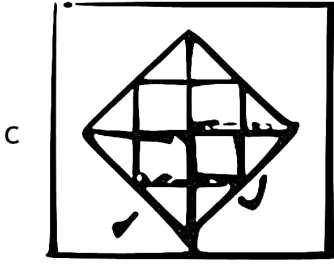


A



B

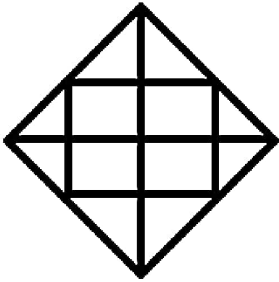




Answer: C

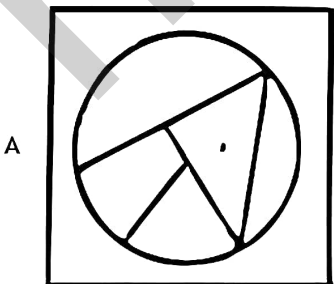
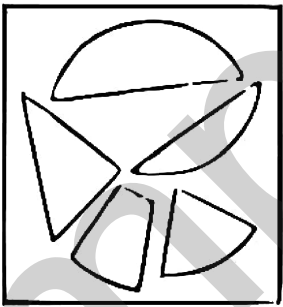
Explanation:

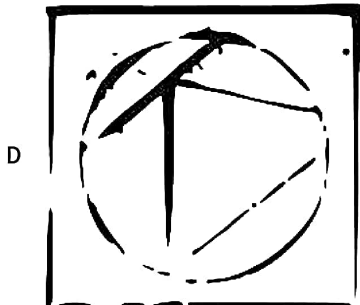
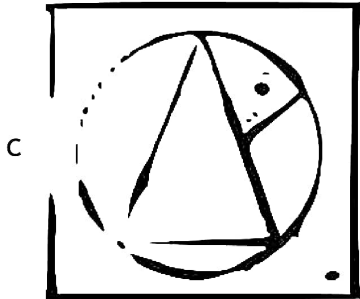
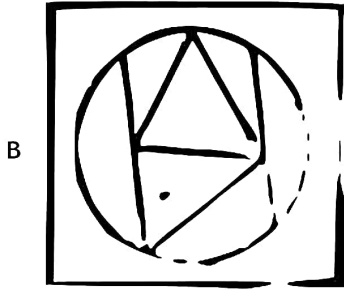
If we join the cut-pieces given above, the figure obtained will be :



=> Ans - (C)

Question 18



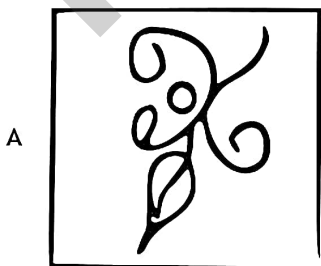
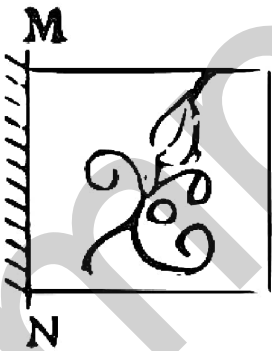


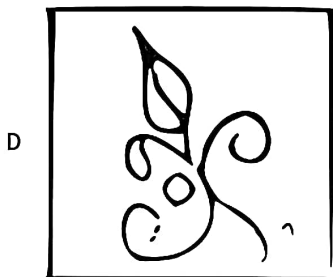
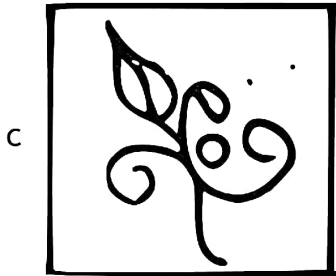
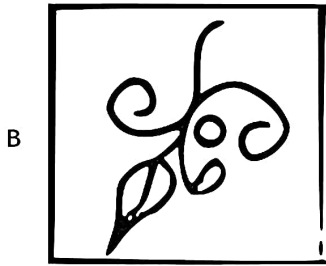
Answer: A

Instructions

In question no. 19 and 20, a mirror is placed on line MN. Then which of the answer figures is the correct image of the given figures ?

Question 19





Answer: D

Explanation:

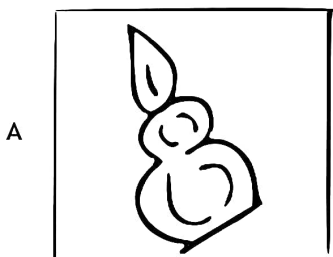
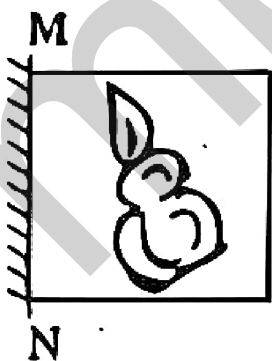
A vertical mirror is placed, so the object on the left will appear right in reverse position and vice-versa.

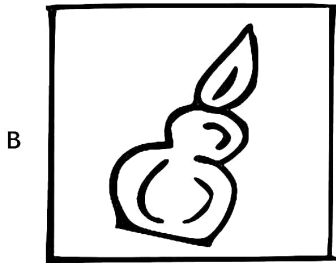
So the leaf pointing top right will now be facing top left, thus the first two options will be eliminated.

Also, in the question figure, the circle at the middle right side will appear at left side, hence fourth option is the right image.

=> Ans - (D)

Question 20





Answer: D

Explanation:

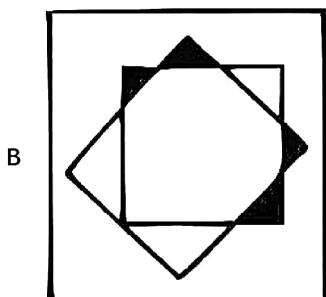
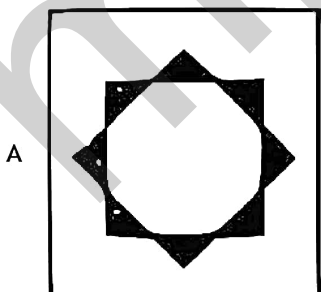
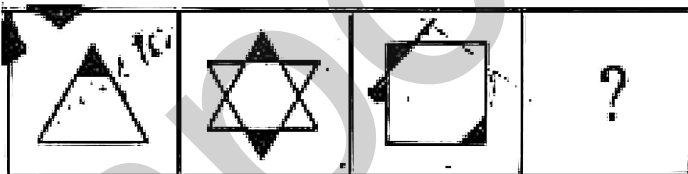
Figure in option D is the mirror image of given figure.

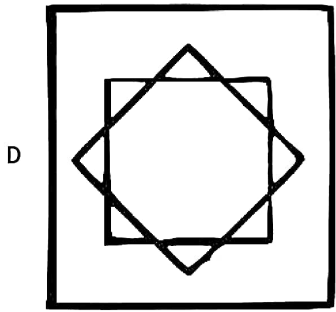
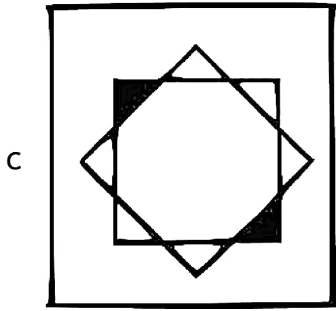
Instructions

For the following questions answer them individually

Question 21

Find the missing figure of the series from the given response.



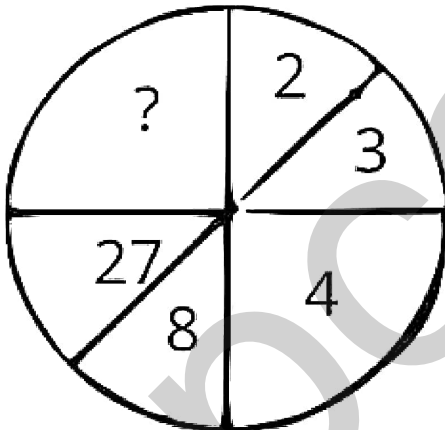


E None of these

Answer: E

Question 22

Select the missing number from the given responses.



A 56

B 49

C 45

D 64

Answer: D

Explanation:

The opposite numbers are cubes of the numbers i.e

$$2^3 = 8$$

$$3^3 = 27$$

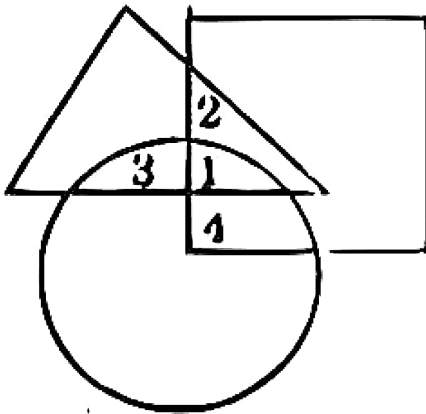
similarly,

$$4^3 = 64$$

hence the correct answers is option D

Question 23

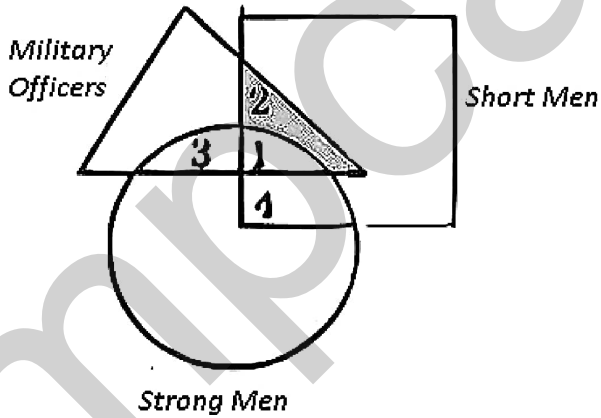
In the given diagram, Circle represents strong men, Square represents short men and Triangle represents military officers. Which region represents military officers who are short but not strong ?



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

Answer: A

Explanation:

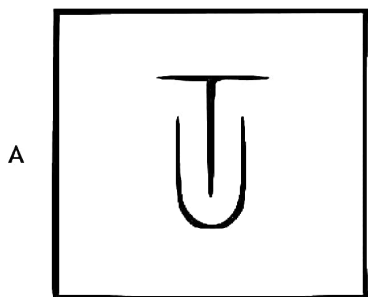


Military officers who are short but not strong is represented by = 2

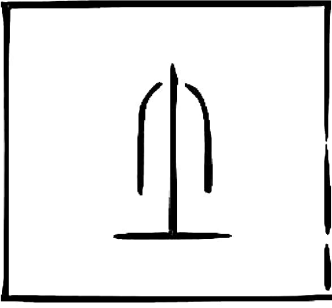
=> Ans - (A)

Question 24

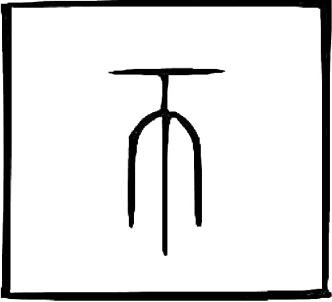
Select the figure which is different from the rest.



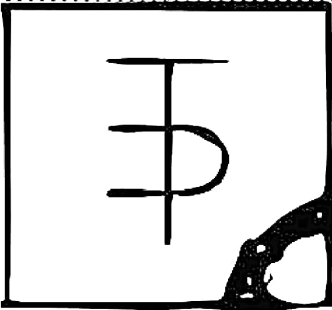
B



C



D



Answer: D

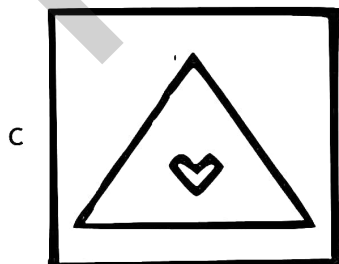
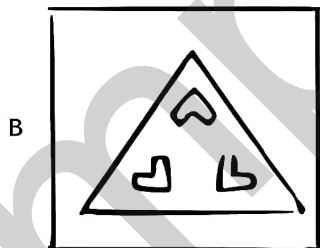
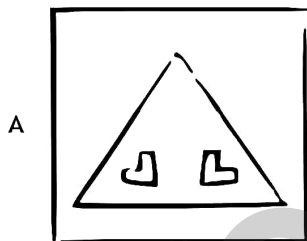
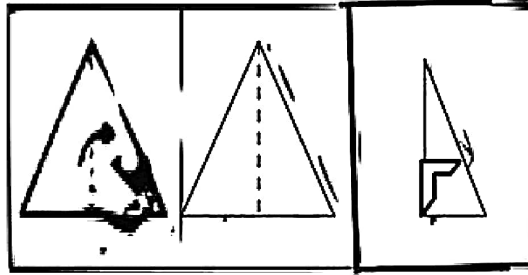
Explanation:

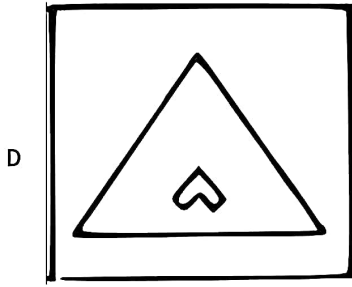
The last figure is different from the rest, as the curve is horizontal and there is an arc at the bottom right area of the square.

=> Ans - (D)

Question 25

A triangular piece of paper is folded and cut as shown below, Find out from the answer figures, how it will appear when opened





Answer: D

English

Instructions

For the following questions answer them individually

Question 26

The new government tooj_____last year.

- A out
- B after
- C over
- D upon

Answer: E

Question 27

Mohan's career has taken some_____twists and turns.

- A incentive
- B interesting
- C interactive
- D intuitive

Answer: E

Question 28

The bus_____fifty passengers fell_____the river.

- A with;into
- B for;upon
- C over;on
- D of;at

Answer: E

Question 29

It is raining_____. Do not go out.

- A heavily
- B fast
- C soundly
- D strongly

Answer: E

Question 30

She tried to adjust_____ her relations.

- A for
- B at
- C so
- D with

Answer: E

Question 31

She was remarkably_____ in singing and dancing.

- A accomplished
- B conducive
- C fluctuating
- D cooperative

Answer: E

Question 32

Sheila gained an advantage_____ me.

- A upon
- B from
- C on
- D over

Answer: E

Question 33

Take this medicine regularly and you will get rid_____this disease.

- A at
- B from
- C of
- D over

Answer: E

Question 34

Statistics_____always my worst subject.

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

Answer: E

Question 35

When she retired, she handed_____the charge to the Vice-President.

- A over
- B out
- C across
- D off

Answer: E

Question 36

Barbaric

- A Thorny
- B Uncivilized
- C Premeditated
- D Barber's

Answer: E

Question 37

Hurdle



- A Suspicion
- B Throw
- C Opposition
- D Obstacle

Answer: E

Question 38

Deter

- A To hinder
- B To neglect
- C To Disapprove
- D To differ

Answer: E

Question 39

indolent

- A Solvent
- B Diligent
- C Malvolent
- D Brilliant

Answer: E

Question 40

Coherent

- A Distorted
- B Disorganized
- C Inept
- D Carefree

Answer: E

Question 41

Brutal

- A Adamant
- B Humane

C Fearless

D Criminal

Answer: E

Question 42

The man changed colours when I questioned him on the allocation of funds.

A turned pale

B got numbed

C turned happy

D got motivated

Answer: A

Question 43

We cannot depend on him for this assignment as it need careful handling and he is like a bull in a china shop.

A a felicitous person

B a clumsy person

C a tactful person

D a no-nonsense person

Answer: B

Question 44

The mother always insists on keeping the house spick and span.

A open

B locked

C safe

D Tidy

Answer: D

Question 45

On receiving his appointment letter, Ravi treated us with a sumptuous meal.

A treated us to

B treated us for

C treated us by

D No improvement

Answer: A

Instructions

Long ago in Mounnelin there lived an fenrei growing old. One day, he sano gram in the street. Upset at being rennin led that someday, he too, would ago, he ordered all the old people to leave his land.

One day, a violent storm iswept, the kingdom. Nothing was safe from its fury. It . • roared into the palace and blew away the emperor's belongings, including his priceless golden pitcher. *hen the storm ended, the emperor ordered that dm pitcher ho found and brought back to him. People went in search of the pitcher. They saw it in a lake nairliy. But no matter who ... • tried, no one could getia grip on the pitcher. All they, got was a handful of water. Yet it coulthe plainlua •glittering and just below the waters surface

Question 46

The emperor's orders were that all the

A children should leave his land

B old men should leave his land

C old men should live in his land

D young men should stay in his land

Answer: E

Question 47

What did the people who went to bring the pitcher get?

A Nothing at all

B A handful of water

C a handful of air

D The pitcher's handle

Answer: E

Question 48

The people saw the golden pitcher

A in a river nearby

B in a lake nearby

C in a pit nearby

D inside the palace

Answer: E

Question 49

the emperor feared

- A getting old
- B getting young
- C getting weak
- D getting ill

Answer: E

Question 50

The emperor was upset to see the old man because

- A it reminded him of his grandfather
- B it reminded him that he might fall ill
- C it reminded him that he would grow old too
- D it reminded him that he had to colour his hair

Answer: E

Quant

Instructions

For the following questions answer them individually

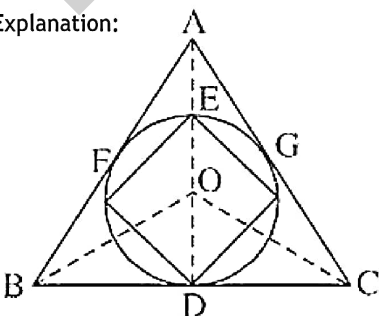
Question 51

A circle is inscribed in an equilateral triangle and a square is inscribed in that circle. The ratio of the areas of the triangle and square is

- A $3\sqrt{3} : 1$
- B $\sqrt{3} : 4$
- C $\sqrt{3} : 8$
- D $3\sqrt{3} : 2$

Answer: D

Explanation:



ABC is an equilateral triangle with side $AB=a$. AO, BO and CO are the angle bisectors of $\angle A$, $\angle B$ and $\angle C$ respectively. $r = \frac{a}{2\sqrt{3}}$

Also, we know that the angle bisector from the vertex of an equilateral triangle is the perpendicular bisector of the opposite side.

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\Rightarrow AD is the perpendicular bisector of BC.

$$\Rightarrow \angle B = \frac{1}{2} \angle OBD = \frac{1}{2} \times 60^\circ = 30^\circ$$

Now, in $\triangle OBD$,

$$\Rightarrow \tan(30^\circ) = \frac{OD}{BD} = \frac{r}{\frac{a}{2}}$$

\Rightarrow

$$r = \frac{1}{\sqrt{3}} \times \frac{a}{2} = \frac{a}{2\sqrt{3}}$$

Now, in right $\triangle EDG$, using Pythagoras theorem

$$\Rightarrow (ED)^2 = (EG)^2 + (GD)^2$$

$$\Rightarrow (2r)^2 = (s)^2 + (s)^2$$

$$\Rightarrow 4r^2 = 2s^2$$

$$\Rightarrow s^2 = 2 \times \left(\frac{a}{2\sqrt{3}}\right)^2$$

$$\Rightarrow s^2 = \frac{a^2}{6}$$

\therefore ar($\triangle ABC$) : ar(DEF)

$$= \left(\frac{\sqrt{3}}{4}a^2\right) : (s)^2$$

$$= \left(\frac{\sqrt{3}}{4}a^2\right) : \left(\frac{a^2}{6}\right)$$

$$= 3\sqrt{3} : 2$$

\Rightarrow Ans - (D)

Question 52

The simplified value of $\frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$ is

A 4

B 3

C 2

D 6

Answer: C

Explanation:

$$\text{Expression : } \frac{\sqrt{32} + \sqrt{48}}{\sqrt{8} + \sqrt{12}}$$

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

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

\Rightarrow Ans - (C)

Question 53

$\sqrt{\frac{9.5 \times 0.085}{0.0017 \times 0.19}}$ equals

A 5

B 50

C 500

D 0.05

Answer: B

Explanation:

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Expression : $\sqrt{\frac{9.5 \times 0.085}{0.0017 \times 0.19}}$

$= \sqrt{\frac{95}{10} \times \frac{85}{1000} \times \frac{10000}{17} \times \frac{100}{19}}$

$= \sqrt{5 \times 5 \times 100}$

$= 5 \times 10 = 50$

=> Ans - (B)

Question 54

Two pipes A and B can fill a tank in 6 hours and 4 hours respectively. If they are opened on alternate hours and if pipe A is opened first, then the tank shall be fill in

A $4\frac{1}{2}$ hrs

B 5 hrs

C $5\frac{1}{2}$ hrs

D 6 hrs

Answer: B

Explanation:

Let total capacity of tank is L.C.M. (6,4) = 12 units

A alone can fill the tank in 6 hours, => A's efficiency = $\frac{12}{6} = 2$ units/hr

Similarly B's efficiency = $\frac{12}{4} = 3$ units/hr

Now, (A+B)'s 2 hour's work (A in first hour and B in second) = $2+3=5$ units

=> In 4 hours, tank filled = $5 \times 2 = 10$ units

=> Remaining part = $12 - 10 = 2$ units, which will be filled by A in the next complete hour.

\therefore Total time = $4 + 1 = 5$ hours

=> Ans - (B)

Question 55

A, B and C can do a piece of work in 10, 12 and 15 days respectively. A leaves 5 days before the completion of the work and B leaves 2 days after A. The whole work lasts for

A 7 days

B 6 days

C 12 days

D 13 days

Answer: A

Explanation:

Let total work = L.C.M. (10, 12, 15) = 60 units

A can complete the work in 10 days, => A's efficiency = $\frac{60}{10} = 6$ units/day

Similarly, B's efficiency = $\frac{60}{12} = 5$ units/day

and C's efficiency = $\frac{60}{15} = 4$ units/day

Let total work is completed in x days, => A worked for $(x-5)$ days and B for $(x-3)$ days

According to ques,

$$\Rightarrow 6(x-5) + 5(x-3) + 4(x) = 60$$

$$\Rightarrow 6x - 30 + 5x - 15 + 4x = 60$$

$$\Rightarrow 15x = 60 + 45 = 105$$

$$\Rightarrow x = \frac{105}{15} = 7 \text{ days}$$

\Rightarrow Ans - (A)

Question 56

A merchant purchases a wrist watch for 450 and fixes its list price in such a way that after allowing a discount of 10% he earns a profit of 20%. Then the list price of the watch is

A 600

B 650

C 700

D 550

Answer: A

Explanation:

Cost price of the watch = Rs. 450

Profit % = 20%

$$\Rightarrow \text{Selling price} = 450 + \left(\frac{20}{100} \times 450\right)$$

=

$$450 + 90 = \text{Rs. } 540$$

Discount % = 10%

$$\Rightarrow \text{List price} = \frac{540}{(100 - 10)} \times 100$$

$$= \frac{540}{90} \times 100 = \text{Rs. } 600$$

\Rightarrow Ans - (A)

Question 57

The ratio in which a man must mix rice at 10.20 per kg and 14.40 per kg so as to make a mixture worth 12.60 per kg, is

A 3:4

B 4:3

C 2:5

D 1:2

Answer: A

Explanation:

Quantity in which man use rice at Rs. 10.20/kg = x kg and at Rs. 14.40/kg = y kg

According to ques,

$$\Rightarrow 10.20x + 14.40y = 12.60(x + y)$$

$$\Rightarrow 102x + 144y = 126x + 126y$$

$$\Rightarrow 126x - 102x = 144y - 126y$$

$$\Rightarrow 24x = 18y$$

$$\Rightarrow \frac{x}{y} = \frac{18}{24} = \frac{3}{4}$$

\therefore he ratio in which mixture worth 12.60 per kg =

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=> Ans - (A)

Question 58

If the sum of the length, breadth and height of a rectangular parallelepiped is 24 cm and the length of its diagonal is 15 cm then its total surface area is

A 351 cm^2

B 256 cm^2

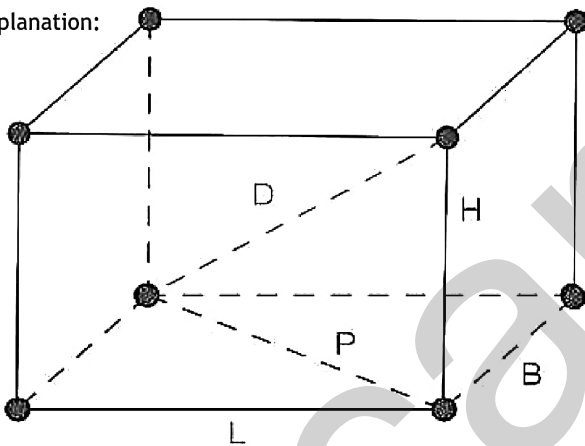
C 265 cm^2

D 315 cm^2

cm^2

Answer: A

Explanation:



Let the length, breadth and height be L, B and H . The base diagonal,

$P^2 = L^2 + B^2$ Again, main diagonal, $D^2 = P^2 + H^2$

$\Rightarrow L^2 + B^2 + H^2 = (15)^2 = 225$

Also, it is given that $L + B + H = 24$

Total surface area =

$2(LB + BH + HL) = x$ Using square of three

term expression, we get :

$\Rightarrow (L + B + H)^2 = (L^2 + B^2 + H^2) + 2(LB + BH + HL)$

$\Rightarrow (24)^2 = 225 + x$

$\Rightarrow x = 576 - 225 = 351 \text{ cm}^2$

=> Ans - (A)

Question 59

Two successive discounts of 30% and 70% are equivalent to single discount of

A 89%

B 75%

C 79%

D 100%

Answer: C

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Explanation:

Let Marked price = Rs. $\$100$

After 1st discount of 30%, price = $\$100 - \left(\frac{30}{100} \times 100\right)$

= $\$100 - 30 = 70$

After 2nd discount of 70% (on changed price), selling price = $\$70 - \left(\frac{70}{100} \times 70\right)$

= $\$70 - 49 = 21$

\therefore Net discount % = $\frac{(100 - 21)}{100} \times 100 = 79\%$

=> Ans - (C)

Question 60

A merchant allows a discount of 10% on marked price for the cash payment. To make a profit of 17%, he must mark his goods higher than their cost price by

A 30%

B 33%

C 40%

D 27%

Answer: A

Explanation:

Let Cost price = Rs. 100

Profit % = 17%

=> Selling price = $\$100 + \left(\frac{17}{100} \times 100\right)$

=

$\$100 + 17 = \text{Rs. } \117

Discount % = 10%

=> Marked price = $\frac{117}{(100 - 10)} \times 100$

= $\$13 \times 10 = \text{Rs. } \130

\therefore Markup % = $\frac{(130 - 100)}{100} \times 100 = 30\%$

=> Ans - (A)

Question 61

The present ages of two persons are 36 and 50 years respectively if after n years the ratio of their ages will be 3:4 then the value of n is

A 3

B 4

C 7

D 6

Answer: D

Explanation:

Present ages of the persons are

According to ques,

$$\Rightarrow \frac{36+n}{50+n} = \frac{3}{4}$$

$$\Rightarrow 144+4n=150+3n$$

$$\Rightarrow 4n-3n=150-144$$

$$\Rightarrow n=6$$

\Rightarrow Ans - (D)

Question 62

Out of 20 boys, 6 are each of 1 m 15 cm height, 8 are of 1 m 10 cm and rest of 1m 12cm. The average height of all of them is

A 1m 12cm

B 1m 12.1cm

C 1m 211cm

D 1m21cm

Answer: B

Explanation:

Total number of boys = 20

Total height of first 6 boys = $6 \times 1.15 = 6.9$ m

Total height of next 8 boys = $8 \times 1.10 = 8.8$ m

Total height of last 6 boys = $6 \times 1.12 = 6.72$ m

\Rightarrow Average height = $\frac{6.9+8.8+6.72}{20}$

= $\frac{22.42}{20} = 1.121 = 1\text{m } 12.1\text{ cm}$

\Rightarrow Ans - (B)

Question 63

Average of first five prime numbers is

A 3.6

B 5.3

C 5.6

D 5

Answer: C

Explanation:

Sum of first 5 prime numbers = $2+3+5+7+11=28$

\Rightarrow Required average = $\frac{28}{5} = 5.6$

\Rightarrow Ans - (C)

Question 64

A dishonest greer sells rice at a profit of 10% and also uses weight which are 20% less than the marked weight. The total gain earned by him will be

- A 35%
- B 37.5%
- C 40%
- D 30.5%

Answer: B

Explanation:

Let cost price = Re. 1/gm = Rs. 1000/kg

Weight used by the seller = $1000 - (\frac{20}{100} \times 1000) = 800$ gm

Selling price = $1000 + (\frac{10}{100} \times 1000) = \text{Rs. } 1100$

\Rightarrow Selling price per gm = $\frac{1100}{800} = \text{Rs. } 1.375$ /gm

\therefore Profit % = $\frac{(1.375 - 1)}{1} \times 100 = 37.5\%$

\Rightarrow Ans - (B)

Question 65

The cost price of a radio is 600. 5% of the cost price is charged toward transportation. After adding that, if the net profit to be made is 15%, then the selling price of the radio must be

- A 684.50
- B 704.50
- C 724.50
- D 664.50

Answer: C

Explanation:

Cost price of radio = Rs. 600

Transportation price = $\frac{5}{100} \times 600 = \text{Rs. } 30$

\Rightarrow Total Cost Price =

$600 + 30 = \text{Rs. } 630$ Profit % = 15%

\Rightarrow Selling price = $630 + (\frac{15}{100} \times 630)$

$= 630 + 94.50 = \text{Rs. } 724.50$

\Rightarrow Ans - (C)

Question 66

A certain amount of money is divided among x, y and z. If x receives 25% more than y and y receives 25% less than z, then x:y:z is equal to

- A 12:10:11
- B 14:12:13
- C 15:12:16
- D 10:9:12

Answer: C

Explanation:

Let amount received by $z=100$

$$\Rightarrow \text{Amount received by } y=100-\left(\frac{25}{100}\right)\times 100=75$$

$$\Rightarrow \text{Amount received by } x=75+\left(\frac{25}{100}\right)\times 75=93.75$$

$$\therefore x:y:z=93.75:75:100$$

$$= 9375:7500:10000$$

Dividing each term by 625, we get = 15:12:16

\Rightarrow Ans - (C)

Question 67

Walking at speed of 5 km/hr, a man reaches his office 6 minutes late. Walking at 6 km/hr, he reaches there 2 minutes early. The distance of his office is:

A 2 km

B 3 km

C 4 km

D 3.5 km

Answer: C

Explanation:

Let ideal time to reach office is in t hours and let distance = d km

When he walks at 5 km/hr, he reaches his office 6 minutes late

Using, distance = speed \times time

$$\Rightarrow d=5\left(t+\frac{6}{60}\right) \quad \text{(i)}$$

$$\text{Similarly, } d=6\left(t-\frac{2}{60}\right) \quad \text{(ii)}$$

Comparing equations (i) and (ii), we get :

$$\Rightarrow 5\left(t+\frac{6}{60}\right)=6\left(t-\frac{2}{60}\right)$$

$$\Rightarrow 5t+\frac{1}{2}=6t-\frac{1}{5}$$

$$\Rightarrow 6t-5t=\frac{1}{2}+\frac{1}{5}$$

$$\Rightarrow t=\frac{(5+2)}{10}=\frac{7}{10}$$

Substituting it in equation (i), $\Rightarrow d=5\left(\frac{7}{10}+\frac{6}{60}\right)$

$$= 5\left(\frac{48}{60}\right)=\frac{48}{12}=4 \text{ km}$$

\Rightarrow Ans - (C)

Question 68

By selling a fan for 600, a man loses 10%. To make a gain of 20%, the selling price of the fan should be

A 800

B 900

C 1000

D 700

Answer: A

Explanation:

Selling price of fan = Rs. 600

Loss % = 10%

$$\Rightarrow \text{Cost price} = \frac{600}{(100-10)} \times 100$$

=

$$\frac{6000}{9} = \text{Rs. } \frac{2000}{3}$$

Profit % = 20%

$$\therefore \text{Selling price} = \frac{2000}{3} + \left(\frac{20}{100}\right) \times \frac{2000}{3}$$

$$= \frac{2000}{3} + \frac{400}{3} = \frac{2400}{3} = \text{Rs. } 800$$

\(\Rightarrow\) Ans - (A)

Question 69

Two persons contested an election of Parliament. The winning candidate secured 57% of the total votes polled and won by a majority of 42,000 votes. The number of total votes polled is

A 4,00,000

B 5,00,000

C 6,00,000

D 3,00,000

Answer: D

Explanation:

Let number of total votes polled = $100x$

Votes secured by winning candidate = $\frac{57}{100} \times 100x = 57x$

\(\Rightarrow\) Votes secured by losing candidate = $100x -$

$$57x = 43x \quad \text{According to ques, } \Rightarrow 57x - 43x = 42,000$$

$$\Rightarrow x = \frac{42,000}{14} = 3,000$$

$$\therefore \text{Total votes polled} = 100 \times 3,000 = 3,00,000$$

\(\Rightarrow\) Ans - (D)

Question 70

A number when reduced by 10% gives 30. The number is

A 35

B $\frac{1}{2}$

C $\frac{1}{3}$

D 40

Answer: C

Explanation:

Let the number be x

$$\text{According to ques, } \Rightarrow x - \left(\frac{10}{100} \times x\right) = 30$$

$$\Rightarrow x - \frac{x}{10} = 30$$

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$$\Rightarrow \frac{9x}{10} = 30$$

$$\Rightarrow x = \frac{30 \times 10}{9} = \frac{100}{3}$$

$$\Rightarrow x = 33\frac{1}{3}$$

\Rightarrow Ans - (C)

Question 71

Two trains 108m and 112 m in length are running towards each other on the parallel lines at a speed of 45 km/hr and 54 km/hr respectively. To cross each other after they meet, it will take

A 10 sec

B 12 sec

C 9 sec

D 8 sec

Answer: D

Explanation:

Sum of lengths of train = $108 + 112 = 220$ m

Trains are running towards each other, \Rightarrow Relative speed = $45 + 54 = 99$ km/hr

$$= 99 \times \frac{5}{18} = 27.5 \text{ m/s}$$

\Rightarrow Time taken = distance/speed

$$= \frac{220}{27.5} = 8 \text{ seconds}$$

\Rightarrow Ans - (D)

Question 72

A sum of money becomes 1.331 times in 3 years as compound interest. The rate of interest is

A 50%

B 8%

C 7.5%

D 10%

Answer: D

Explanation:

Let principal sum = Rs. x and rate of interest = $r\%$

\Rightarrow Amount after 3 years = Rs. $1.331x$

Amount under compound interest = $P \left(1 + \frac{R}{100}\right)^T$

$$\Rightarrow x \left(1 + \frac{r}{100}\right)^3 = 1.331x$$

$$\Rightarrow 1 + \frac{r}{100} = \sqrt[3]{1.331}$$

$$\Rightarrow \frac{r}{100} = 1.1 - 1 = 0.1$$

$$\Rightarrow r = 0.1 \times 100 = 10\%$$

\Rightarrow Ans - (D)

Question 73

A person deposited 500 for 4 years and 600 for 3 years at the same rate of simple interest in a bank. Altogether she received 190 as interest. The rate of simple interest per annum was

- A 3%
- B 4%
- C 5%
- D 2%

Answer: C

Explanation:

Let rate of interest = $r\%$

Simple interest = $\frac{P \times R \times T}{100}$

According to ques,

$$\Rightarrow \left(\frac{500 \times r \times 4}{100}\right) + \left(\frac{600 \times r \times 3}{100}\right) = 190$$

$$= 20r + 18r = 190$$

$$\Rightarrow r = \frac{190}{38} = 5\%$$

\Rightarrow Ans - (C)

Question 74

The following graph represents the maximum and minimum temperature recorded every day in a certain week. The day on which the difference between the maximum and minimum temperature was maximum is

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

Answer: C

Explanation:

Difference between the maximum and minimum temperature :



(A) : Monday = \$45-

30=15\$ (B) : Wednesday =

\$32-15=17\$

(C) : Saturday = \$48-25=23\$ [MAX]

(D) : Sunday = \$39-23=16\$

=> Ans - (C)

Question 75

Different choices made by a group of 200 students are given below in percentages. The number of students who have taken neither Science nor Commerce is

Percentage of Students in different streams	
Name of the Streams	Intake Ratio
Science	29%
Arts	29%
Commerce	31%
Home Science	6%
Others	5%

A 40

B 80

C 120

D 60

Answer: B

Explanation:

Total number of students = 200

% of students who have taken neither Science nor Commerce = $29+6+5=40\%$

=> Total number of students who have taken neither Science nor Commerce = $\frac{40}{100} \times 200 = 80$

=> Ans - (B)

General Awareness

Instructions

For the following questions ar

Question 76

Name the commander of the Arab army who conquered the Sindh

- A Mubammad bin Qasim
- B Al Hazzaz
- C Qutbuddin Aibak
- D Allauddin Khilji

Answer: A

Question 77

Who was the chairperson of the Chinese Communist Party at the time of liberation of China ?

- A Liu shaoqi
- B Zhou Enlai
- C Deng Xiaoping
- D Mao Zedong

Answer: E

Question 78

Who was regarded by Gandhiji as his political guru ?

- A Gopal krishna gokhale
- B lala lajpt rai
- C bipin chandra pal
- D bal gangadhar tilak

Answer: E

Question 79

Select the high yielding varieties of seed-crops developed under green revolution in india

- A Wheat rice sugarene pulse and maizo
- B rice wheat pulses oil seeds and sugareane
- C maize blacj-gram jowar coffe and tea
- D rice wheat jowar bajra and maize

Answer: D

Question 80

In which year did amartya kumar sen receive the nobel prize in economics ?

- A 1990
- B 1998
- C 1995
- D 2000

Answer: E

Question 81

The worldwide great depression took place in

- A 1930
- B 1936
- C 1929
- D 1928

Answer: A

Question 82

india is the largest producer and consumer of

- A sugar
- B paddy
- C tea
- D coffee

Answer: C

Question 83

A camera in the hands of a professional photographer is a ____ good.

- A capital
- B free
- C intermediary
- D consumer

Answer: E

Question 84

which among the following movements was not led by mahatma gandhi?



- A civil disobedience movement
- B quit india movement
- C swadeshi movement
- D non-cooperation movement

Answer: C

Question 85

constitution of india came into force in

- A 1949
- B 1951
- C 1956
- D 1950

Answer: E

Question 86

cold war refers to

- A tension between east and west
- B ideological rivalry between capitalist and communist world
- C tension between superpower
- D all of the above

Answer: E

Question 87

which one of the following is not an all india service?

- A indian police service
- B indian foreign service
- C indian forest service
- D indian administrative service

Answer: B

Question 88

in which session of the indian national congress was the poorna swaraj resolution adopted?

- A karachi session in 1931

- B lucknow session in 1916
- C belgaum session in 1924
- D lahore session in 1929

Answer: D

Question 89

the school of arts developed during the kusham period with the mixture of indian and greek style know as

- A mughal art
- B kusham art
- C persian art
- D gandhara art

Answer: E

Question 90

where was christopher columbus from ?

- A portugal
- B venice
- C genoa
- D spain

Answer: C

Question 91

speed of processor chip is measured in

- A bytes/second
- B mbps
- C mhz
- D bits/second

Answer: C

Question 92

which command is not used to switch off the computer

- A hibernate

- B turn off
- C log off
- D shut down

Answer: E

Question 93

which one out of the following helps in burning?

- A carbon dioxide
- B oxygen
- C carbon monoxide
- D nitrogen

Answer: B

Question 94

in organic compounds, nitrogen is estimates by

- A Dumas method
- B Carius method
- C Victor-meyer's method
- D Liebig's method

Answer: A

Question 95

the tropic of cancer does not pass through

- A China
- B Myanmar
- C Nepal
- D Bangladesh

Answer: C

Question 96

The country in east asia which is most conspicuous for its decreasing population growth since 1981 is

- A Japan
- B South korea
- C Thailand

D China

Answer: A

Question 97

the sathusamudram ship canal project sscp is supposed to reduce the distance between chennai and tuticorin by___ nautical miles.

A 305

B 361

C 434

D 243

Answer: C

Question 98

Cities with population from one to five million are called

A Cosmopolitan

B Conurbation

C Million city

D Metroplitan

Answer: D

Question 99

Master copy of genetic information is

A DNA

B Nucleus

C r-RNA

D m-RNA

Answer: A

Question 100

contraceptive pills in the market contain

A steroid-hormones

B inorganic compounds

C herbicides

D antibiotics

Answer: A