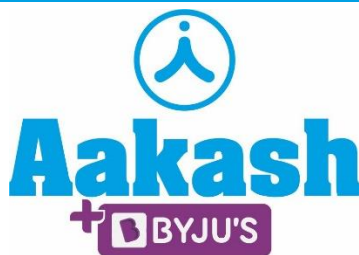


08/08/2022

Slot-1



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**Answers & Solutions**  
**for**  
**CUET UG-2022**  
**(General Test)**

Time : 60 min.

M.M. : 300

**IMPORTANT INSTRUCTIONS:**

1. The test is of 60 Minutes duration.
2. The test contains 75 Questions out of which 60 questions need to be attempted.
3. Marking Scheme of the test:
  - a. Correct answer or the most appropriate answer: Five marks (+5)
  - b. Any incorrect option marked will be given minus one mark (–1).
  - c. Unanswered/Marked for Review will be given no mark (0).

**Choose the correct answer :**

**Question ID: 652291**

Which country is known as the "land of the Rising Sun"?

- (A) Korea (B) Japan  
(C) Finland (D) China

**Answer (B)**

**Sol.** Japan is known as the "land of the Rising Sun".

**Question ID: 652292**

Arrange the following days in the order of the date of observance in India

- (a) National Good Governance Day  
(b) Armed Forces Flag Day  
(c) Vijay Diwas  
(d) Hindi Day  
(e) Teacher's Day

Choose the correct answer from the options given below.

- (A) (c), (e), (b), (d), (a) (B) (c), (e), (d), (b), (a)  
(C) (e), (d), (a), (c), (b) (D) (d), (b), (e), (c), (a)

**Answer (NA)**

**Sol. (Option doesn't match the order)**

National Good Governance Day	–	25 December
Armed Forces Flag Day	–	7 December
Teacher's Day	–	5 September
Vijay Diwas	–	16 December
Hindi Day	–	14 September

**Question ID: 652293**

Which country successfully launched a new satellite named Shijian-21?

- (A) South Korea  
(B) Pakistan  
(C) China  
(D) UAE

**Answer (C)**

**Sol.** China launched the debris mitigation technology satellite Shijian 21 from XSLC in Southwest China's Sichuan province in October 2021.

**Question ID: 652294**

The Reserve Bank of India has authorized..... to collect direct taxes on behalf of the Central Board of Direct Taxes (CBDT)

- (A) KARUR Vyasa Bank (KVB)  
(B) ICICI Bank  
(C) HDFC Bank  
(D) Axis Bank

**Answer (A)**

**Sol.** The Reserve Bank of India has authorised Karur Vyasa Bank (KVB) to collect direct taxes on behalf of the Central Board of Direct Taxes (CBDT).

Following the approval received, KVB has initiated the integration process with CBDT.

**Question ID: 652295**

Match the List I with List II.

	List I (Country)		List II (Capital)
a.	Belarus	i.	Jerusalem
b.	Angola	ii.	Budapest
c.	Hungary	iii.	Minsk
d.	Israel	iv.	Luanda

Choose the correct answer from the options given below.

- (A) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)  
(B) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)  
(C) (a)-(iv), (b)-(ii), (c)-(i), (d)-(iii)  
(D) (a)-(i), (b)-(ii), (c)-(iv), (d)-(iii)

**Answer (B)**

**Sol.** Belarus – Minsk  
Angola – Luanda  
Hungary – Budapest  
Israel – Jerusalem

**Question ID: 652296**

Which among the following are the ranks of commissioned officers in army?

- (a) General (b) Commodore  
(c) Colonel (d) Captain  
(e) Group Captain

Choose the correct answer from the options given below.

- (A) (a), (c) and (d) only (B) (b), (c) and (e) only  
(C) (a), (b) and (d) only (D) (c), (d) and (e) only

**Answer (A)**

**Sol.** Army – General  
Colonel  
Captain  
Navy – Commodore  
Air-Force – Group Captain

**Question ID : 652297**

Which among the following are the part of forebrain?

- (a) Cerebrum (b) Cerebellum  
(c) Medulla Oblangata (d) Hypothalamus  
(e) Diencephalon

Choose the correct answer from the options given below.

- (A) (a), (d) and (e) only (B) (a), (c) and (e) only  
(C) (b), (c) and (d) only (D) (a), (b) and (d) only

**Answer (A)**

**Sol.** Cerebrum, Hypothalamus and Diencephalon are the part of forebrain.

**Question ID : 652298**

Which among the following enzymes is required to digest protein?

- (A) Disaccharides (B) Trypsin  
(C) Amylase (D) Lipase

**Answer (B)**

**Sol.** Trypsin enzyme is required to digest protein.

**Question ID : 652299**

What is the name of the largest diamond in the world?

- (A) The Cullinan (B) The Kohinoor  
(C) The Sergio (D) The Woyie River

**Answer (A)**

**Sol.** The world's biggest diamond is the Cullinan, discovered in the South-Africa.

**Question ID : 6522910**

Which among the following countries have lion as their National emblem?

- (a) Spain (b) Belgium  
(c) Norway (d) France  
(e) Netherlands

Choose the correct answer from the options given below:

- (A) (a), (c) and (d) only (B) (b), (c) and (e) only  
(C) (a), (b) and (d) only (D) (c), (d) and (e) only

**Answer (B)**

**Sol.** Belgium, Norway and Netherlands have lion as their National emblem.

- Spain - Pillars of Hercules  
France - Gallic rooster, fleur-de-lis, Marianne

**Question ID : 6522911**

First Field Marshal of India was:

- (A) General KM Kariappa  
(B) General SHFJ Manekshaw  
(C) General V P Malik  
(D) General Bipin Rawat

**Answer (B)**

**Sol.** General SHFJ Manekshaw was the first person who was promoted to the rank of Field Marshal.

**Question ID : 6522912**

Which team has won the men's cricket world cup most number of times?

- (A) West Indies (B) India  
(C) England (D) Australia

**Answer (D)**

**Sol.** Australia has won the men's cricket world cup most number of times i.e. 5 times.

- India – 2 times  
West Indies – 2 times

**Question ID : 6522913**

Find the correct option

$M \times N : 13 \times 14 :: F \times R : ?$

- (A)  $7 \times 19$  (B)  $5 \times 17$   
(C)  $14 \times 15$  (D)  $6 \times 18$

**Answer (D)**

**Sol.**  $M \times N : 13 \times 14$   
 $13 \quad 14$

- Number of Alphabet

$F \times R : 6 : 18$   
 $6 \quad 18$

**Question ID : 6522914**

\_\_\_\_\_ transforms source code into the machine-readable code by converting into line by line.

- (A) Register (B) Compiler  
(C) Cache Memory (D) Interpreter

**Answer (B)**

**Sol.** Compiler transforms source code into the machine-readable code by converting into line by line.

**Question ID : 6522915**

Match the List-I with List-II

	List-I		List-II
a.	Amartya Sen	I.	Dreams from My Father
b.	Amrita Pritam	II.	The Argumentative Indian
c.	Aung San Suu Kyi	III.	Death of a city
d.	Barack Obama	IV.	Freedom from Fear

Choose the correct answer from the options given below;

- (A) a - II, b - III, c - IV, d - I  
 (B) a - III, b - IV, c - I, d - II  
 (C) a - IV, b - II, c - I, d - III  
 (D) a - I, b - II, c - IV, d - III

**Answer (A)**

**Sol.** Amartya Sen - The Argumentative Indian  
 Amrita Pritam - Death of a city  
 Aung San Suu Kyi - Freedom from fear

**Question ID : 6522916**

The National Rail University has been established in India at:

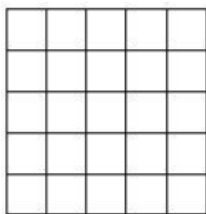
- (A) Gorakhpur (B) Varanasi  
 (C) Malda (D) Vadodara

**Answer (D)**

**Sol.** India's first railway university National Rail and Transportation Institute (NRTI) was dedicated to the nation by Gujarat Chief Minister Vijay Rupani.

**Question ID: 6522917**

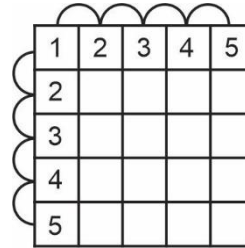
1. Find the number of rectangles in the below figure:



- (A) 25 (B) 125  
 (C) 225 (D) 55

**Answer (C)**

**Sol.**



$$\begin{aligned} \text{Row } 5 + 4 + 3 + 2 + 1 &= 15 \\ \text{Column } 5 + 4 + 3 + 2 + 1 &= 15 \\ &\times \\ &= 225 \end{aligned}$$

**Question ID: 6522918**

Time appears in the mirror 11:09. Then, what time it will appear in the clock?

- (A) 1 : 51 (B) 12 : 09  
 (C) 12 : 51 (D) 1 : 09

**Answer (C)**

**Sol.** Time = 11 : 9

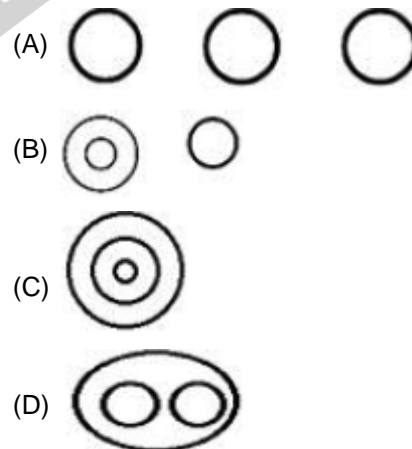
$$\begin{array}{r} 11:60 \\ \text{Time in mirror} = \frac{11:09}{0:51} \end{array}$$

Means 12 : 51

**Question ID: 6522919**

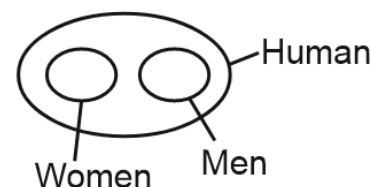
Identify the diagram that best represents the relationship among:

Men, Women, Human



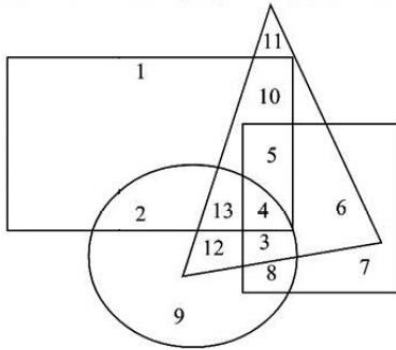
**Answer (d)**

**Sol.**



**Question ID: 6522920**

In the following diagram, police represents circle, corrupt represents triangle, poet represents square and married represents rectangle



The number representing unmarried police officers who are not corrupt but are poets is

- (A) 8 (B) 9  
(C) 2 (D) 4

**Answer (A)**

**Sol.** Common in circle and square only which is 8

**Question ID: 6522921**

Arrange the following words in correct order

- (a) Omelete (b) Hen  
(c) roll (d) serve  
(e) egg

Choose the correct answer from the options given below :

- (A) b, e, a, d, c (B) e, b, a, c, d  
(C) b, e, a, c, d (D) b, a, e, c, d

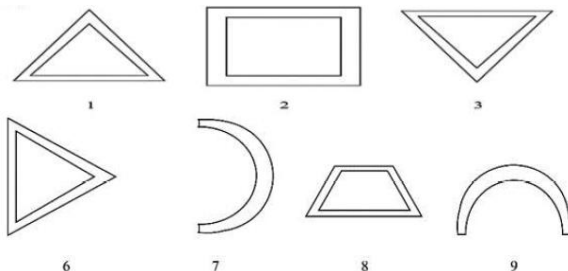
**Answer (C)**

- Sol.** (a) Omelete .....(3)  
(b) Hen .....(1)  
(c) roll .....(4)  
(d) serve .....(5)  
(e) egg .....(2)

Hence, b, e, a, c, d.

**Question ID: 6522922**

Group the following figures into three classes on the basis of identical proportions



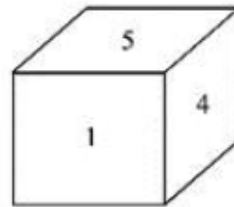
- (A) 1, 2, 3; 4, 5, 6; 7, 8, 9  
(B) 1, 3, 6; 2, 4, 8; 5, 7, 9  
(C) 2, 4, 5; 1, 3, 8; 7, 6, 9  
(D) 1, 4, 5; 2, 3, 8; 7, 6, 9

**Answer (N.A)**

**Sol.** In question only 7 fig. given but in option there 9 fig.

**Question ID: 6522923**

In a dice, 1, 2, 3 and 4 are written on the adjacent faces, in a clockwise order and 5 and 6 at the top and bottom. When three is at the top, what will be at the bottom?



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

**Answer (D)**

**Sol.** Dice is single so it is standard Dice. And we know sum of opposite side of standard Dice is 7

so,  $3 \Leftrightarrow 4$

**Question ID: 6522924**

What is the mirror-image of SMILE?

- (A) 2MJEI (B) 2MIEL  
(C) 5WJEI (D) 5WIEL

**Answer (NA)**

**Sol.** No answer is matching.

**Questions ID : 6522925**

Find the missing number

9			11			15		
5	52	8	9	46	3	9	?	6
	3			8			8	

- (A) 64 (B) 71  
(C) 48 (D) 23

**Answer (B)**

**Sol.**  $8 \times 5 + 9 + 3 = 52$

$9 \times 3 + 11 + 8$

So

$8 \times 6 + 15 + 8 = 71$





**Question ID: 6522934**

Fox : Vixen :: Drake : ?

- (A) Bee (B) Duck  
(C) Doe (D) Drone

**Answer (B)****Sol.** Feminine of each other.**Question ID: 6522935**

Arrange the following words in the sequence they will appear in the dictionary:

- A. Research B. Resurgence  
C. Respiration D. Respective  
E. Resources

Choose the correct answer from the options given below:

- (A) D, C, E, A, B (B) E, C, D, B, A  
(C) A, E, D, C, B (D) C, D, A, E, B

**Answer (C)**

**Sol.** A. Research B. Resurgence  
C. Respiration D. Respective  
E. Resources  
AEDCB.

**Question ID: 6522936**

If in a certain language, D is coded as 2, I is coded as 1, N is coded as 7, M is coded as 5, A is coded as 0, O is coded as 8, how is DIAMOND coded in that language?

- (A) 2105872 (B) 2015782  
(C) 2108752 (D) 2017582

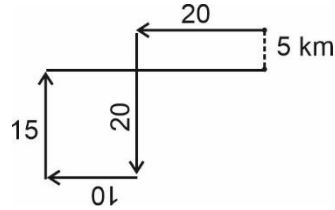
**Answer (A)**

**Sol.** D I A M O N D  
↓ ↓ ↓ ↓ ↓ ↓ ↓  
2 1 0 5 8 7 2

**Question ID: 6522937**

Kiya drives her car 20 km west from her home, then turns left and goes 20 km more, then, she turns right and goes 10 km and then she turns right and goes 15 km, finally she goes 30 km more after turning right again. At what distance is she from the starting point?

- (A) 05 km (B) 10 km  
(C) 15 km (D) 25 km

**Answer (A)****Sol.****Question ID: 6522938**

Complete the series;

52, 58, 60, 66, 70, 72, ....

- (A) 74 (B) 76  
(C) 78 (D) 80

**Answer (B)**

**Sol.** 52 58 60 66 70 72 76  
+6 +2 +6 +4 +2 +4

**Question ID: 6522939**

If 9<sup>th</sup> day of a month is Sunday, What will be the last day of the month, on which Sunday will fall?

- (A) 28<sup>th</sup> (B) 29<sup>th</sup>  
(C) 30<sup>th</sup> (D) 31<sup>th</sup>

**Answer (C)**

**Sol.** 9<sup>th</sup> – Sunday  
16<sup>th</sup> – Sunday  
23<sup>rd</sup> – Sunday  
30<sup>th</sup> – Sunday

**Question ID: 6522940**

Complete the series;

7, 23, 95, 479, 2879, ....

- (A) 11519 (B) 14399  
(C) 17279 (D) 20159

**Answer (D)**

**Sol.** 7 23 95 479 2879 20159  
x3+1 x4+3 x5+4 x6+6 x7+6

**Question ID : 6522941**

Complete the series;

8192, 2048, ...?..., 128, 32, 8

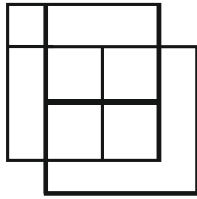
- (A) 256 (B) 248  
(C) 1024 (D) 512

**Answer (D)**

**Sol.** 8192 2048 512 128 32 8  
x4 x4 x4 x4 x4

**Question ID : 6522942**

How many squares are there in a given shape?



- (A) 11 (B) 12  
(C) 13 (D) 15

**Answer (11)**

**Sol.** Conceptual question.

**Question ID : 6522943**

In this question, four words have been given of which three are alike in some way and one is different. Find the odd one out.

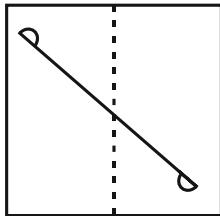
- (A) Rose  
(B) Lotus  
(C) Jasmine  
(D) Sunflower

**Answer (B)**

**Sol.** Lotus because it grown in water.

**Question ID : 6522944**

Which image will appear when the following transparent sheet will be folded



- (A) (B)   
(C) (D)

**Answer (C)**

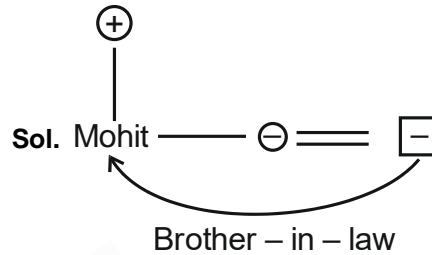
**Sol.** Sense Based

**Question ID : 6522945**

Pointing towards a person in the photograph, Mohit said, "he is the husband of the only daughter of the father of my sister's brother." How is that person related to Mohit?

- (A) Uncle (B) Cousin  
(C) Brother – in – law (D) Brother

**Answer (C)**



**Question ID : 6522946**

What is the value of x if  $4 : x = x : 16$  \_\_\_\_\_?

- (A) 16 (B) 8  
(C) 9 (D) 12

**Answer (B)**

**Sol.**  $\frac{4}{x} = \frac{x}{16}$  cross multiply

$$64 = x^2 \Rightarrow x = 8$$

**Question ID : 6522947**

If  $P = ₹ 2000$ ,  $R = 5\%$  per annual,  $T = 5$  year

- A. Total sum of amount = ₹ 2200  
B. SI = ₹ 200  
C. SI = ₹ 500  
D. Total sum of amount = ₹ 2500

Choose the correct answer from the potions given below:

- (A) C and D Only (B) A and C Only  
(C) B and C Only (D) A and D Only

**Answer (A)**

**Sol.**  $P = ₹ 2000$ ,  $R = 5\%$ ,  $T = 5$  year

$$S.I. = \frac{2000 \times 5 \times 5}{100} = 500 \text{ rs}$$

$$\text{Amount} = 2000 + 500 = 2500 \text{ rs.}$$

**Question ID : 6522948**

Find the LCM of  $\frac{3}{5}$ ,  $\frac{4}{9}$  and  $\frac{5}{8}$  is

- (A) 45 (B) 55  
(C) 60 (D) 65



**Answer (C)**

**Sol.** LCM of fraction =  $\frac{\text{LCM of Num.}}{\text{HCF of Den.}}$

$$\Rightarrow \frac{60}{1} = 60$$

**Question ID: 6522949**

In a swimming pool measuring 80 m × 60 m, 120 men take a dip. If the average displacement of water by a man is 6 m<sup>3</sup>, then the rise in water level is –

- (A) 0.25 m                      (B) 0.10 m  
(C) 0.15 m                      (D) 0.35 m

**Answer (C)**

**Sol.** Volume of water displaced – Displacement of water by 120 min.

$$80 \times 60 \times h = 120 \times 6$$

$$4800 h = 720$$

$$h = \frac{720}{4800} = 0.15\text{m}$$

**Question ID: 6522950**

The average age of group of 5 friends is 32 years. The youngest friend amongst them is 4 years old. What was the average age of the group at the time of birth of the youngest friend?

- (A) 36 years                      (B) 35 years  
(C) 34 years                      (D) 33 years

**Answer (B)**

**Sol.** 5 Friend → 32 years

$$\text{Sum of their age} \Rightarrow 32 \times 5 = 160 \text{ years}$$

The youngest one 4 year old means born 4 year age Now 4 years ago

$$\text{Sum} = 160 - (4 \times 5) = 160 - 20 = 140 \text{ years}$$

$$\text{Average age of group of time of birth of youngest one is } \frac{140}{4} = 35 \text{ years}$$

**Question ID: 6522951**

A volume of a wall is 128 cm<sup>3</sup>. If the height of the wall is 6 times its breadth and the length is 9 times its breadth, find the breadth.

- (A)  $\sqrt[3]{3.45}$  cm                      (B)  $\sqrt[3]{4.74}$  cm  
(C)  $\sqrt[3]{2.37}$  cm                      (D)  $\sqrt[3]{2.38}$  cm

**Answer (C)**

**Sol.** Let the breadth = x cm

$$\text{Height} = 6 \times \text{breadth}$$

$$\text{Length} = 9 \times \text{breadth}$$

$$128 \text{ cm}^3 = 9x \times 6x \times x$$

$$128 \text{ cm}^3 = 54x$$

$$\frac{128 \text{ cm}^3}{54} = x \quad \Rightarrow \quad x = \sqrt[3]{2.37} \text{ cm}$$

**Question ID: 6522952**

If P = x% of Y and Q = y% of x, then which of following is true?

- (A) P = Q                              (B) P > Q  
(C) P < Q  
(D) Relationship between P and Q cannot be established

**Answer(A)**

**Sol.** Let x = 100

$$\text{Let } y = 50$$

$$P = 100\% \text{ of } 50 \Rightarrow \frac{100}{100} \times 50 = 50$$

$$Q = 50\% \text{ of } 100 \Rightarrow \frac{50}{100} \times 100 = 50$$

$$\text{So } P = Q$$

**Question ID: 6522953**

A man makes a profit of 20% after selling a product on 28% discount on the printed price. Find the ratio of printed price to cost price

- (A) 7 : 3                              (B) 5 : 3  
(C) 4 : 3                              (D) 8 : 3

**Answer (B)**

**Sol.** Profit % = 20%

$$\text{Discount \%} = 28\%$$

$$SP = \frac{CP \times (100 + P\%)}{100}$$

$$SP = \frac{MP \times (100 - D\%)}{100}$$

$$\text{Let } CP = x$$

$$SP = \frac{x \times 120}{100} = \frac{6x}{5} \quad \dots(i)$$

$$\text{Also, } 20\% \text{ on } MP$$

$$SP = MP \times \frac{72}{100}$$

$$MP = \frac{6x}{5} \times \frac{100}{72}$$

$$MP = \frac{5x}{3} \quad \dots(ii)$$

CP : MP

$$\frac{CP}{MP} = \frac{x}{\frac{5x}{3}}$$

$$x \times \frac{3}{5x} = \frac{3}{5}$$

CP : MP

5 : 3

**Question ID : 6522954**

Alice is faster than Bob, Alice and Bom each walk 30 km. The sum of their speeds is 8 km/hr and sum of time taken by them is 16 hours. Then Alice's speed is equal to

- (A) 5 (B) 4  
(C) 6 (D) 8

**Answer (A)**

**Sol.** Let Alice speed = x km/h

Bob's speed = 8 - x km/h

$$\text{So, } \frac{30}{x} + \frac{30}{(8-x)} = 16$$

$$30(8-x) + 30x = 16x(8-x)$$

$$240 - 30x + 30x = 128x - 16x^2$$

$$16x^2 - 128x + 240 = 0$$

$$x^2 - 8x + 15 = 0$$

$$(x-5)(x-3)$$

$$x = 3 \text{ and } x = 5$$

**Question ID : 6522955**

A and B are two points in a river. Point X and Y divide the line AB in three equal parts. Let the flow of the river is from A to B. The ratio of the time taken to row from point A to Y and from B to Y is 3 : 4. Find the ratio of the speed of the boat upstream to the flow of the river.

- (A) 5 : 6 (B) 6 : 5  
(C) 4 : 5 (D) 5 : 4

**Answer (B)**

**Sol.** River Flow = y

Boat Flow = x

$$x + y = \frac{2}{3} \Rightarrow x = \frac{11}{24}$$

$$x - y = \frac{1}{4} \Rightarrow y = \frac{5}{24}$$

$$\frac{\text{Boat Upstream}}{\text{River Flow}} = \frac{x-y}{x} = \frac{\frac{6}{24}}{\frac{11}{24}} = \frac{6}{11} = 6.5$$

**Question ID : 6522956**

A and B can complete a piece of work in 30 days. B and C in 10 days, which C and A in 5 days. If all of them work together, the time taken in completing the work

- (A) 4 Days (B) 5 Days  
(C) 6 Days (D) 7 Days

**Answer (C)**

**Sol.**

$$\begin{array}{lcl} A+B = \frac{1}{30} & \text{---} & 1 \text{ Unit} \\ B+C = \frac{1}{10} & \text{---} & 3 \text{ Unit} \\ C+A = \frac{1}{5} & \text{---} & 6 \text{ Unit} \end{array}$$

Total work = 30

$$2A + 2B + 2C = 10 \text{ unit}$$

$$2(A+B+C) = \frac{10}{2} = 5 \text{ unit in one day}$$

$$\text{Total work} = 30$$

$$\text{So days} = \frac{30}{5} = 6 \text{ days}$$

**Question ID : 6522957**

Suresh covers a distance by a cycle at 10 km/h. He returns to the starting point in a car at a speed of 50 km/h. Find the average speed for the entire journey.

- (A) 36.66 km/h (B) 16.66 km/h  
(C) 26.66 km/h (D) 46.66 km/h

**Answer (B)**

**Sol.** Time taken by cycle =  $\frac{x}{10}$

$$\text{Time taken by car} = \frac{x}{50}$$

$$\text{Total distance} = 2x \Rightarrow \frac{2x}{\frac{x}{10} + \frac{x}{50}}$$

$$= \frac{2x \times 500}{60x} = 16.66 \text{ km/h}$$

**Question ID : 6522958**

A boy secures 70%, 40% and 60% marks in test papers with 100, 50 and 150 respectively as maximum marks. The percentage of his aggregate is :

- (A) 55 (B) 60  
(C) 56.66 (D) 70

**Answer (B)**

**Sol.**  $70\% \text{ of } 100 = \frac{70}{100} \times 100 = 70 \text{ marks}$

$40\% \text{ of } 50 = \frac{40}{100} \times 50 = 20 \text{ marks}$

$60\% \text{ of } 150 = \frac{60}{100} \times 150 = 90 \text{ marks}$

180 is 60% of 300

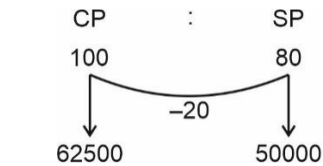
**Question ID : 6522959**

Radha sells her scooter for ₹50000 at a loss of 20%. At what price she should sell her scooter to make a profit of 10%?

- (A) ₹65750 (B) ₹64750  
(C) ₹66750 (D) ₹68750

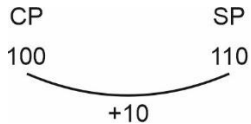
**Answer (D)**

**Sol.** Let



Now

At profit of 10%



$$80 - 50,000$$

$$1 = \frac{50,000}{80} = 625$$

So  $110 = 625 \times 110 = 68750$

**Question ID : 6522960**

Ratio between age of P and Q is 5 : 7. If 2 years ago Q's age was 2 years more than the age of P after 4 years, then find their total age

- (A) 30 years (B) 35 years  
(C) 42 years (D) 48 years

**Answer (D)**

**Sol.** P and Q = 5 : 7

$P = 5x$

$Q = 7x$

$7x - 2 = (5x + 4) + 2$

$2x = 8$

$x = 4$

Total sum =  $12x = 48$

**Question ID : 6522961**

If  $(a+b)^2 = 5 + 2\sqrt{6}$ , what can be the possible value of 'b' from the following?

- (A)  $\sqrt{7}$  (B)  $\sqrt{3}$   
(C)  $\sqrt{6}$  (D) 5

**Answer (B)**

**Sol.**  $(a+b)^2 = 5 + 2\sqrt{6}$

$a \text{ or } b = \sqrt{2} \text{ and } \sqrt{3}$

$(\sqrt{2} + \sqrt{3})^2 = 5 + 2\sqrt{6}$

$B = \sqrt{3}$

**Question ID : 6522962**

If  $x - \frac{1}{x} = 3$ , then the value of  $x^2 + \frac{1}{x^2}$  is

- (A) 9 (B) 11  
(C) 7 (D) 3

**Answer (C)**

**Sol.**  $\left(x + \frac{1}{x}\right)^2 = x^2 + \frac{1}{x^2} + 2 \times x \times \frac{1}{x}$

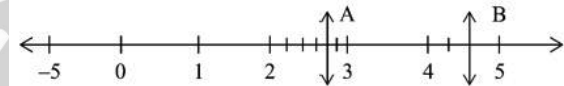
$\Rightarrow (3)^2 = x^2 + \frac{1}{x^2} + 2$

$9 = x^2 + \frac{1}{x^2} + 2 \Rightarrow x^2 + \frac{1}{x^2} + 2 = 9$

$\Rightarrow x^2 + \frac{1}{x^2} = 9 - 2 = 7$

**Question ID : 6522963**

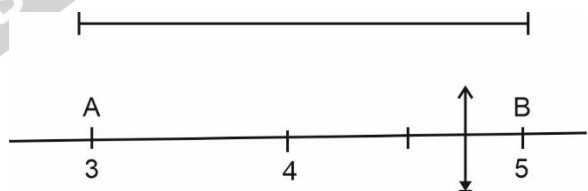
Distance of A to B is



- (A) 1.8 unit (B) 1.9 unit  
(C) 2 unit (D) 2.1 unit

**Answer (B)**

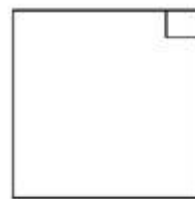
**Sol.**



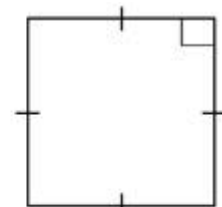
2 Units

**Question ID : 6522964**

The ratio of the sides of the squares in the given figure is



Area = 1.69 cm<sup>2</sup>



← 5.2 cm →

- (A) 13 : 4 (B) 1 : 4  
(C) 4 : 3 (D) 10 : 4

**Answer (B)**

**Sol.** Area =  $1.69 \text{ cm}^2$

$$\text{Side} = \sqrt{1.69} = 1.3 \text{ cm}$$

Side of II<sup>nd</sup> square 5.2 cm

$$\text{Ratio } \frac{13}{10} \times \frac{10}{52} = 1:4$$

**Question ID: 6522965**

Find the mean of 12, 15, 7, 8 and 'x + 13', if x = 2

- (A) 11.2 (B) 9.5  
(C) 11.4 (D) 12

**Answer (C)**

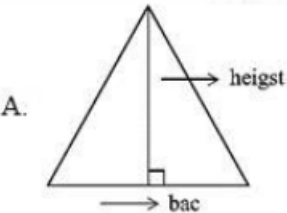
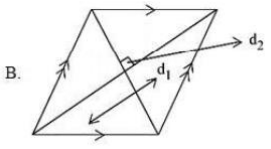
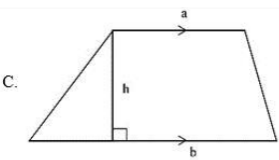
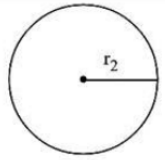
**Sol.** 12 15 7 8,  $2x + 13$

So, 12 15 7 8 15

$$\text{Mean} = \frac{\text{Sum of all no.}}{\text{Total no.}} = \frac{57}{5} = 11.4$$

**Question ID: 6522966**

Match List I with List II

List-I	List-II
A. 	I. $\pi r^2$
B. 	II. $\frac{1}{2} \times \text{base} \times \text{height}$
C. 	III. $\frac{1}{2} \times d_1 \times d_2$
D. 	IV. $\frac{1}{2} \times (a+b) \times h$

Choose the correct answer from the options given below:

- (A) A-IV, B-II, C-III, D-I (B) A-III, B-IV, C-II, D-I  
(C) A-I, B-III, C-IV, D-II (D) A-II, B-III, C-IV, D-I

**Answer (D)**

**Sol.** Area of given figures.

**Question ID: 6522967**

The diameter of a circle whose area is numerically 110 more than its circumference is

- (A) 5 units (B) 7 units  
(C) 14 units (D) 10 units

**Answer (B)**

$$\text{Sol. } \pi r^2 = 2\pi r + 110$$

$$\pi r^2 - 2\pi r = 110$$

$$\pi r - (r - 2) = 110$$

$$\frac{22}{7}r - (r - 2) = 110$$

$$r(r - 2) = 7 \times 5$$

$$\boxed{r = 7}$$

**Question ID: 6522968**

If  $m - n = 16$  and  $m^2 + n^2 = 400$ , the value of  $mn$  is

- (A) 72 (B) 25  
(C) 144 (D) 192

**Answer (A)**

$$\text{Sol. } (16)^2 = 400 - 2mn$$

$$256 = 400 - 2mn$$

$$256 - 400 = -2mn$$

$$-144 = -2mn$$

$$72 = mn$$

So the value of  $mn$  72.

**Question ID: 6522969**

The value of 'y' in the question  $2x + 3y - 7 = 0$  if  $x = -3/2$

- (A) 10 (B)  $10/3$   
(C)  $4/3$  (D)  $13/3$

**Answer (B)**

$$\text{Sol. } 2x + 3y - 7 = 0 \text{ if } x = \frac{-3}{2}$$

$$2 \times \left(\frac{-3}{2}\right) + 3y - 7 = 0$$

$$-3 + 3y - 7 = 0$$

$$3y - 10 = 0$$

$$3y = 10$$

$$y = \frac{10}{3}$$

Question ID : 6522970

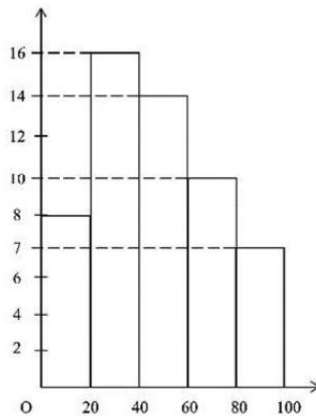
The total number of people owing books more than '40' is

- (A) 60 (B) 31  
(C) 14 (D) 30

Answer (B)

Sol. More than 40

$$14 + 10 + 7 = 31$$



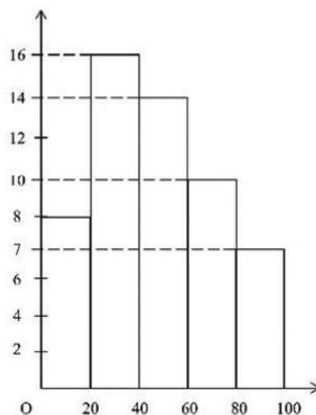
Questions ID : 6522971

The number of people owing books more than 20 but less than 60 is

- (A) 14 (B) 16  
(C) 30 (D) 40

Answer (B)

Sol. More than 20 but less than 60 = 16



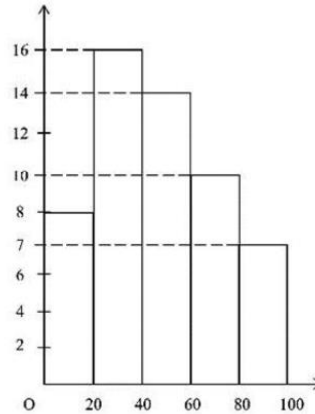
Questions ID : 6522972

The total number of people surveyed is

- (A) 16 (B) 56  
(C) 54 (D) 55

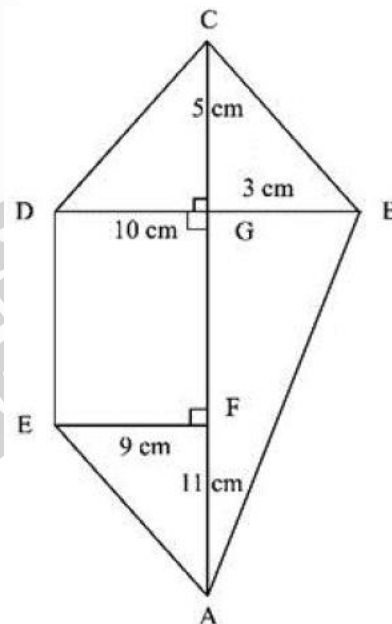
Answer (55)

Sol. People surveyed → 55



Questions ID : 6522973

'AC' is 23 cm in the adjoining figure. Consider the figure and answer the questions



The area of DGFE is

- (A) 133 cm<sup>2</sup> (B) 140 cm<sup>2</sup>  
(C) 70 cm<sup>2</sup> (D) 66.5 cm<sup>2</sup>

Answer (D)

Sol. DGFE

$$\frac{1}{2}(a+b) \times h = \frac{1}{2}(10+9) \times 7 = \frac{1}{2} \times 19 \times 7$$

$$\Rightarrow \frac{133}{2} = 66.5 \text{ cm}^2$$

Questions ID : 6522974

The area of  $\triangle DBC$  if DB is a straight line

- (A) 32.5 cm<sup>2</sup> (B) 65 cm<sup>2</sup>  
(C) 25 cm<sup>2</sup> (D) 15 cm<sup>2</sup>

**Answer (A)**

**Sol.** Area of  $\triangle BDC$

$$\frac{1}{2} \times B \times H = \frac{1}{2} \times (13 \times 5) = \frac{65}{2} = 32.5 \text{ cm}^2$$

**Questions ID : 6522975**

The total area of figure is

(A) 184.5  $\text{cm}^2$  (B) 205  $\text{cm}^2$

(C) 175.5  $\text{cm}^2$  (D) 153  $\text{cm}^2$

**Answer (C)**

**Sol.** Area of figure = ar  $\triangle BDC$  + ar of DGFE + ar  $\triangle AGB$   
+ ar  $\triangle EFA$

$$\text{ar } \triangle BDC = \frac{1}{2} \times B \times H \Rightarrow \frac{1}{2} \times 13 \times 5 = 32.5 \text{ cm}^2$$

$$\text{ar } \triangle AGB = \frac{1}{2} \times B \times H \Rightarrow \frac{1}{2} \times 18 \times 3 = 27 \text{ cm}^2$$

$$\text{ar } \triangle EFA = \frac{1}{2} \times B \times H \Rightarrow \frac{1}{2} \times 9 \times 11 = 49.5 \text{ cm}^2$$

$$\text{DGFE} = \frac{1}{2} (a+b) \times H \Rightarrow \frac{1}{2} (10+9) \times 7 = 66.5 \text{ cm}^2$$

So total area is

$$\Rightarrow 32.5 + 27 + 49.5 + 66.5 = 175.5$$

