Quantitative Aptitude Questions

Latest Quantitative Aptitude MCQ Objective Questions

Question 1:

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Sum of three consecutive number is 105. Find the average of highest and second highest number?

1. 41.5
2. 35.5
3. 32.5
4. 37.5
5. 33.5

Answer (Detailed Solution Below)

Option 2 : 35.5

Quantitative Aptitude Question 1 Detailed Solution

Given:

Sum of three consecutive numbers = 105

Calculations:

If numbers are (n – 1), n, (n + 1)

Sum = 3n

Average of highest and second highest = (n + (n + 1)) ÷ 2

⇒ 3n = 105

⇒ n = 105 ÷ 3

⇒ n = 35

Numbers are: 34, 35, 36

⇒ Average of 35 and 36 = (35 + 36) ÷ 2

⇒ 71 ÷ 2 = 35.5

∴ **Required average = 35.5.**

Question 2:

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A and B start a business with Rs. 8000 and Rs. 6000. After 8 months B left the business. If total B's share of profit is Rs. 4200. Find the A's share of profit?

1. 7420
2. 8970
3. 8400
4. 8820
5. 8670

Answer (Detailed Solution Below)

Option 3 : 8400

Quantitative Aptitude Question 2 Detailed Solution

Given:

A invests = 8000

B invests = 6000

B withdraws after 8 months

B's profit share = 4200

Formula used:

Profit share ∝ Capital × Time

Calculations:

B's ratio = 6000 × 8

A's ratio = 8000 × 12

⇒ A's value = 8000 × 12 = 96000

⇒ B's value = 6000 × 8 = 48000

⇒ Ratio A : B = 96000 : 48000

⇒ = 2 : 1

If B's share = 4200

⇒ 1 part = 4200

⇒ A's share = 2 × 4200

⇒ = 8400

∴ **A's share of profit = Rs. 8400.**

Question 3:

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Total mixture of milk and water in container A is 44. Milk is 6 litres more than water. Find the amount of water should added to the mixture so that ratio of milk and water is 1:1?

1. 9
2. 10
3. 6
4. 7
5. 8

Answer (Detailed Solution Below)

Option 3 : 6

Quantitative Aptitude Question 3 Detailed Solution

Given:

Total mixture = 44 litres

Milk is 6 litres more than water

Calculations:

Let water = x

Milk = x + 6

x + (x + 6) = 44

To make milk : water = 1 : 1 → Milk = New water

⇒ 2x + 6 = 44

⇒ 2x = 38

⇒ x = 19

⇒ Water = 19 L

⇒ Milk = 25 L

To make ratio 1 : 1 ⇒ Water must become 25 L

⇒ Extra water needed = 25 – 19

⇒ = 6 L

∴ **Amount of water to be added = 6 litres.**

Question 4:

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Profit percentage is 40% and marked up percentage is 50%. If discount is Rs. 40 then find cost price?

1. 620

2. 400

3. 480

4. 320

5. 440

Answer (Detailed Solution Below)

Option 2 : 400

Quantitative Aptitude Question 4 Detailed Solution

Given:

Profit % = 40%

Marked up % = 50%

Discount = 40

Calculations:

Let CP = x

Marked Price = x + 50% of x = 1.5x

Selling Price = CP + 40% of CP = 1.4x

Discount = MP – SP

⇒ 1.5x – 1.4x = 40

⇒ 0.1x = 40

⇒ x = 40 ÷ 0.1

⇒ x = 400

∴ **Cost Price = Rs. 400.**

Question 5:

View this Question Online >

Circumference of circle is 176 m. Find the area of circle?

1. 2874
2. 2254
3. 2642
4. 2464
5. 2264

Answer (Detailed Solution Below)

Option 4 : 2464

Quantitative Aptitude Question 5 Detailed Solution

Given:

Circumference (C) = 176 m

Formula used:

$C = 2\pi r$

$Area = \pi r^2$

Calculations:

$\Rightarrow 176 = 2 \times 22/7 \times r$

⇒ r = 176 × 7 ÷ (44)

⇒ r = 28 m

Area = 22/7 × 28 × 28

⇒ Area = 22/7 × 784

⇒ Area = 22 × 112

⇒ Area = 2464 m²

∴ **Area of the circle = 2464 m².**

Top Quantitative Aptitude MCQ Objective Questions

Question 6 View this Question Online >

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

1. 36
2. 63
3. 99
4. none of these

Answer (Detailed Solution Below)

Option 1 : 36

Quantitative Aptitude Question 6 Detailed Solution

Given:

$x - 1/x = 3$

Concept used:

$a^3 - b^3 = (a - b)^3 + 3ab(a - b)$

Calculation:

$x^3 - 1/x^3 = (x - 1/x)^3 + 3 \times x \times 1/x \times (x - 1/x)$

$\Rightarrow (x - 1/x)^3 + 3(x - 1/x)$

$\Rightarrow (3)^3 + 3 \times (3)$

$\Rightarrow 27 + 9 = 36$

$\therefore$ **The value of $x^3 - 1/x^3$ is 36.**

Alternate Method

If $x - 1/x = a$, then $x^3 - 1/x^3 = a^3 + 3a$

Here $a = 3$

$x - 1/x^3 = 3^3 + 3 \times 3$

$= 27 + 9$

$= 36$

Question 7 View this Question Online >

A shopkeeper earns a profit of 25 percent on selling a radio at 15 percent discount on the Printed price. Finds the ratio of the Printed price and the cost price of the radio.

1. 17 : 25

2. 25 : 27

3. 27 : 25

4. 25 : 17

5. None

Answer (Detailed Solution Below)

Option 4 : 25 : 17

Quantitative Aptitude Question 7 Detailed Solution

Given:

Profit = 25 Percent

Discount = 15 Percent

Formula:

MP/CP = (100 + Profit %)/(100 – Discount %)

MP = Printed Price

CP = Cost Price

Calculation:

We know that –

MP/CP = (100 + Profit %)/(100 – Discount %) ..... (1)

Put all given values in equation (1) then we gets

MP/CP = (100 + 25)/(100 – 15)

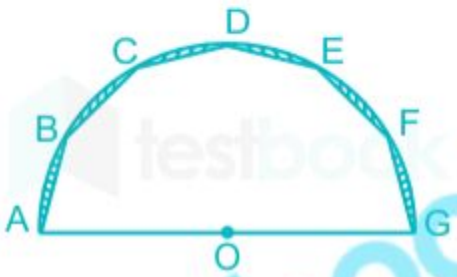
⇒ 125/85

⇒ 25/17

∴ **The Ratio of the Printed price and cost price of radio will be 25 : 17**

Question 8 View this Question Online >

Six chords of equal lengths are drawn inside a semicircle of diameter $14\sqrt{2}$ cm. Find the area of the shaded region?



1. 7
2. 5
3. 9
4. 8

Answer (Detailed Solution Below)

Option 1 : 7

Quantitative Aptitude Question 8 Detailed Solution

Given:

Diameter of semicircle = $14\sqrt{2}$ cm

Radius = $14\sqrt{2}/2 = 7\sqrt{2}$ cm

Total no. of chords = 6

Concept:

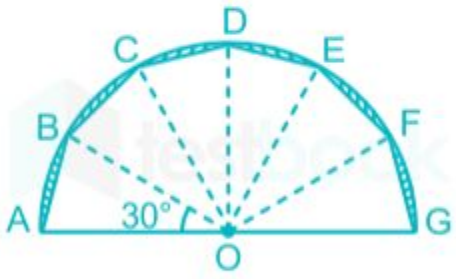
Since the chords are equal in length, they will subtend equal angles at the centre. Calculate the area of one sector and subtract the area of the isosceles triangle formed by a chord and radius, then multiply the result by 6 to get the desired result.

Formula used:

Area of sector = $(\theta/360°) \times \pi r^2$

Area of triangle = $1/2 \times a \times b \times \text{Sin } \theta$

Calculation:



The angle subtended by each chord = 180°/no. of chord

$\Rightarrow 180°/6$

$\Rightarrow 30°$

Area of sector AOB = $(30°/360°) \times (22/7) \times 7\sqrt{2} \times 7\sqrt{2}$

$\Rightarrow (1/12) \times 22 \times 7 \times 2$

$\Rightarrow (77/3)\ cm^2$

Area of triangle AOB = $1/2 \times a \times b \times \text{Sin } \theta$

$\Rightarrow 1/2 \times 7\sqrt{2} \times 7\sqrt{2} \times \text{Sin } 30°$

$\Rightarrow 1/2 \times 7\sqrt{2} \times 7\sqrt{2} \times 1/2$

$\Rightarrow 49/2\ cm^2$

$\therefore$ Area of shaded region = 6 × (Area of sector AOB - Area of triangle AOB)

$\Rightarrow 6 \times [(77/3) - (49/2)]$

$\Rightarrow 6 \times [(154 - 147)/6]$

$\Rightarrow 7\ cm^2$

$\therefore$ **Area of shaded region is 7 cm^2**

Question 9 View this Question Online >

If the price of petrol has increased from Rs. 40 per litre to Rs. 60 per litre, by how much percent a person has to decrease his consumption so that his expenditure remains same.

1. 66.67%
2. 40%
3. 33.33%
4. 45%
5. None of these

Answer (Detailed Solution Below)

Option 3 : 33.33%

Quantitative Aptitude Question 9 Detailed Solution

GIVEN :

If the price of petrol has increased from Rs. 40 per litre to Rs. 60 per litre

CALCULATION :

Let the consumption be 100 litres.

When price is Rs. 40 per litres, then, the expenditure = 100 × 40

⇒ Rs. 4,000.

At Rs. 60 per litre, the 60 × consumption = 4000

Consumption = 4,000/60 = 66.67 litres.

∴ Required decreased % = 100 - 66.67 = 33.33%

Question 10 View this Question Online >

There is a rectangular garden of 220 metres × 70 metres. A path of width 4 metres is built around the garden. What is the area of the path?

1. 2472 metre^2
2. 2162 metre^2
3. 1836 metre^2
4. 2384 metre^2

Answer (Detailed Solution Below)

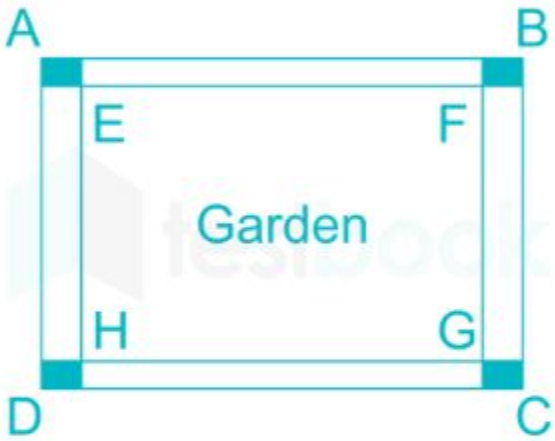
Option 4 : 2384 metre^2

Quantitative Aptitude Question 10 Detailed Solution

Formula used

Area = length × breath

Calculation



The garden EFGH is shown in the figure. Where EF = 220 meters & EH = 70 meters.

The width of the path is 4 meters.

Now the area of the path leaving the four colored corners

= [2 × (220 × 4)] + [2 × (70 × 4)]

= (1760 + 560) square meter

= 2320 square meters

Now, the area of 4 square colored corners:

4 × (4 × 4)

{∵ Side of each square = 4 meter}

= 64 square meter

The total area of the path = the area of the path leaving the four colored corners + square colored corners

⇒ Total area of the path = 2320 + 64 = 2384 square meter

∴ **Option 4 is the correct answer.**

Question 11 View this Question Online >

In an election between two candidates, the winning candidate got 70 percent votes of the valid votes and he won by a majority of 3630 votes. If out of total votes polled 75 percent votes are valid, then what is the total number of votes polled?

1. 15200
2. 13000
3. 16350
4. 12100

Answer (Detailed Solution Below)

Option 4 : 12100

Quantitative Aptitude Question 11 Detailed Solution

Given:

Valid votes = 75% of total votes

Winning Candidate = 70% of Valid votes

He won by a majority of 3630 votes

Losing Candidate = 30% of Valid votes

Calculation:

Let 100x be the total number of votes polled

Valid votes = 75% of total votes

= 0.75 × 100x

= 75x

Majority of the Winning Candidate is 3630

Then, Difference between Winning and Losing Candidate = (70 % - 30 %) of valid votes

= 40% of the valid votes

Valid Votes = 75x

Then,

= 0.40 × 75x

= 30x

Hence, 30x is Majority of winning candidate

30x = 3630

x = 121

Total number of votes is 100x

= 100 × 121

= 12100

Answer is 12100.

Question 12 View this Question Online >

A train of length 400 m takes 15 seconds to cross a train of length 300 m traveling at 60 km per hour from the opposite direction along a parallel track. What is the speed of the longer train, in km per hour?

1. 108
2. 102
3. 98
4. 96

Answer (Detailed Solution Below)

Answer (Detailed Solution Below)

Option 1 : 108

Quantitative Aptitude Question 12 Detailed Solution

Given

Length of first train (L1) = 400 m

Length of second train (L2) = 300 m

Speed of second train (S2) = 60 km/hr

Time taken to cross each other (T) = 15 s

Concept:

Relative speed when two objects move in opposite directions is the sum of their speeds.

Calculations:

Let the speed of the first train = x km/hr

Total length = 300 + 400

Time = 15 sec

According to the question:

700/15 = (60 + x) × 5/18

28 × 6 = 60 + x

x = 108 km/hr.

Therefore, the speed of the longer train is 108 km per hour.

Question 13 View this Question Online >

Which of the following number is largest among all?

0.7 $0.\bar{7}$ $0.0\bar{7}$ 0.07

0.7, 0.7, 0.07, 0.07

1. 0.07
2. $0.0\bar{7}$
3. 0.7
4. $0.\bar{7}$

Answer (Detailed Solution Below)

Option 4 : $0.\bar{7}$

Quantitative Aptitude Question 13 Detailed Solution

Concebt used

$a.\bar{b}$ = a.bbbbbb

$a.0\bar{b}$ = a.0bbbb

Calculation

0.7 = 0.700000....

$0.\bar{7} = 0.77777\ldots$

$0.0\bar{7} = 0.077777\ldots$

$0.07 = 0.070707\ldots$

Now, 0.7777... or $0.\bar{7}$ is largest among all.

Question 14 View this Question Online >

u : v = 4 : 7 and v : w = 9 : 7. If u = 72, then what is the value of w?

1. 98
2. 77
3. 63
4. 49

Answer (Detailed Solution Below)

Option 1 : 98

Quantitative Aptitude Question 14 Detailed Solution

Given:

u : v = 4 : 7 and v : w = 9 : 7

Concept Used: In this type of question, number can be calculated by using the below formulae

Calculation:

u : v = 4 : 7 and v : w = 9 : 7

To make ratio v equal in both cases

We have to multiply the 1st ratio by 9 and 2nd ratio by 7

u : v = 9 × 4 : 9 × 7 = 36 : 63 ----(i)

v : w = 9 × 7 : 7 × 7 = 63 : 49 ----(ii)

Form (i) and (ii), we can see that the ratio v is equal in both cases

So, Equating the ratios we get,

u : v : w = 36 : 63 : 49

⇒ u : w = 36 : 49

When u = 72,

⇒ w = 49 × 72/36 = 98

∴ **Value of w is 98**

Question 15 View this Question Online >

What is the value of $12\frac{1}{2} + 12\frac{1}{3} + 12\frac{1}{6}$?

1. 36
2. 37
3. 39
4. 38

Answer (Detailed Solution Below)

Option 2 : 37

Quantitative Aptitude Question 15 Detailed Solution

Solution:

$12\frac{1}{2} + 12\frac{1}{3} + 12\frac{1}{6}$

= 25/2 + 37/3 + 73/6

= (75 + 74 + 73)/6

= 222/6

= 37

Shortcut Trick

$12\frac{1}{2} + 12\frac{1}{3} + 12\frac{1}{6}$

= 12 + 12 + 12 + (1/2 + 1/3 + 1/6)

= 36 + 1 = 37