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**QUANTITATIVE APTITUDE  
QUESTIONS  
FOR ALL COMPETITIVE EXAMS**

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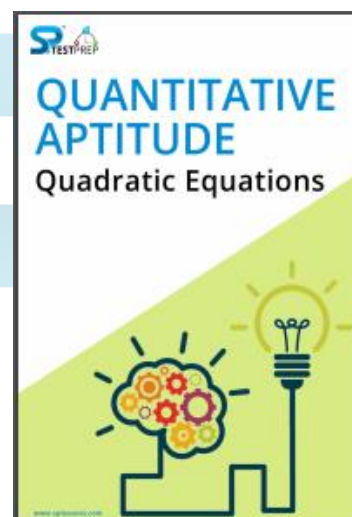
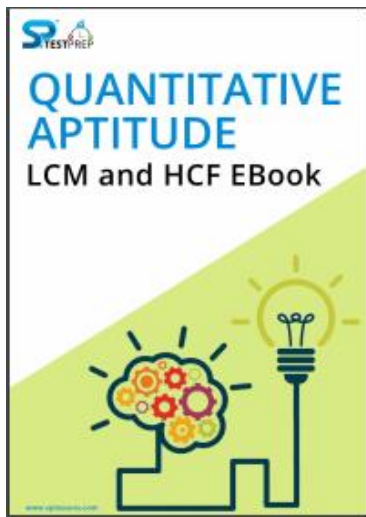
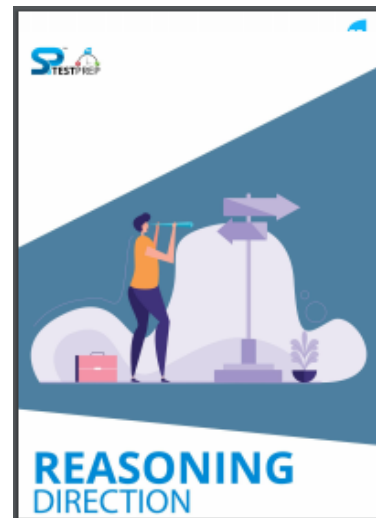
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## RRB NTPC Exam Duration

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## RRB NTPC Forms

## RRB NTPC FAQ Test Day

1. Express a speed of 36 kmph in meters per second?

- A. 10 mps
- B. 12 mps
- C. 14 mps
- D. 17 mps

Answer: A

Explanation:

$$36 * \frac{5}{18} = 10 \text{ mps}$$

2. Express 25 mps in kmph?

- A. 15 kmph
- B. 99 kmph
- C. 90 kmph
- D. None

Answer: C

Explanation:

$$25 * \frac{18}{5} = 90 \text{ kmph}$$

3. A and B together can do a piece of work in 8 days. If A alone can do the same work in 12 days, then B alone can do the same work in?

- A. 20 days
- B. 16 days
- C. 24 days
- D. 28 days





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Answer: C

Explanation:

$$B = \frac{1}{8} - \frac{1}{2} = \frac{1}{24} = 24 \text{ days}$$

4. A can do a piece of work in 4 days. B can do it in 5 days. With the assistance of C they completed the work in 2 days. Find in how many days can C alone do it?

- A. 10 days
- B. 20 days
- C. 5 days
- D. 4 days

Answer: A

Explanation:

$$C = \frac{1}{2} - \frac{1}{4} - \frac{1}{5} = \frac{1}{20} = 20 \text{ days}$$

5. A and B can do a piece of work in 12 days and 16 days respectively. Both work for 3 days and then A goes away. Find how long will B take to complete the remaining work?

- A. 15 days
- B. 12 days
- C. 10 days
- D. 9 days

Answer: D

Explanation:

$$\frac{3}{12} + \frac{3+x}{16} = 1$$

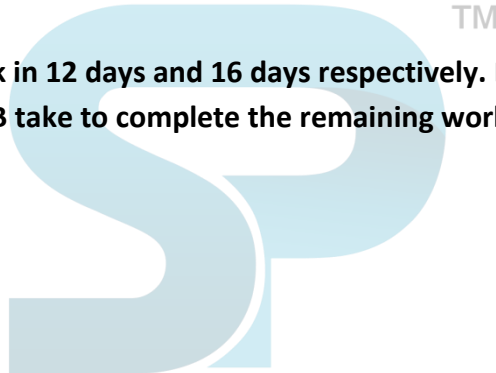
$$x = 9 \text{ days}$$

6. What number has a 5:1 ratio to the number 10?

- A. 42
- B. 50
- C. 55
- D. 62

Answer: B

Explanation:





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$$5:1 = x:10$$

$$x = 50$$

7. If a: b = 7: 5, b: c = 9: 11, find a: b: c?

- A. 63: 14: 55
- B. 63: 45: 55
- C. 14: 14: 15
- D. 7: 14: 15

Answer: B

Explanation:

$$a: b = 7: 5$$

$$b: c = 9: 11$$

$$a: b: c = 63: 45: 55$$

8. The inverse ratio of 3: 2: 1 is?

- A. 1:2:3
- B. 2:3:1
- C. 3:1:2
- D. 2:3:6

Answer: D

Explanation:

$$\frac{1}{3} : \frac{1}{2} : \frac{1}{1} = 2:3:6$$

9. At what rate percent on simple interest will Rs.750 amount to Rs.900 in 5 years?

- A. 5%
- B.  $3\frac{1}{2}\%$
- C. 4%
- D.  $5\frac{1}{2}\%$

Answer: C

Explanation:

$$150 = \frac{(750 \times 5 \times R)}{100}$$





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R = 4%

10. Find the simple interest on Rs.500 for 9 months at 6 paisa per month?

- A. Rs.345
- B. Rs.270
- C. Rs.275
- D. Rs.324

Answer: B

Explanation:

$$I = \frac{500 \times 9 \times 6}{100} = 270$$

11. A certain sum of money at simple interest amounted Rs.840 in 10 years at 3% per annum, find the sum?

- A. Rs.500
- B. Rs.515
- C. Rs.525
- D. None

Answer: D

Explanation:

$$840 = P \left[ 1 + \frac{(10 \times 3)}{100} \right]$$

$$P = 646$$



12. The average of first 10 even numbers is?

- A. 18
- B. 22
- C. 9
- D. 11

Answer: D

Explanation:

Sum of 10 even numbers =  $10 \times 11 = 110$

$$\text{Average} = \frac{110}{10} = 11$$





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13. The average of 11 numbers is 10.9. If the average of first six is 10.5 and that of the last six is 11.4 the sixth number is?

- A. 11.0
- B. 11.2
- C. 11.4
- D. 11.5

Answer: D

Explanation:

$$1 \text{ to } 11 = 11 * 10.9 = 119.9$$

$$1 \text{ to } 6 = 6 * 10.5 = 63$$

$$6 \text{ to } 11 = 6 * 11.4 = 68.4$$

$$63 + 68.4 = 131.4 - 119.9 = 11.5$$

$$6\text{th number} = 11.5$$

14. The average of first ten prime numbers which are odd is?

- A. 12.9
- B. 13.8
- C. 17
- D. 15.8

Answer: D

Explanation:

Sum of first 10 prime no. which are odd = 158

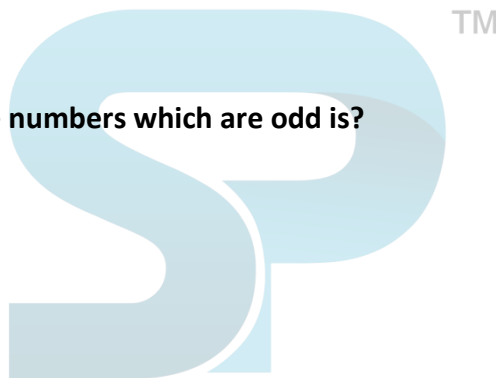
$$\text{Average} = 158/10 = 15.8$$

15. At the end of three years what will be the compound interest at the rate of 10% p.a. on an amount of Rs.20000?

- A. Rs.6620
- B. Rs.6500
- C. Rs.6800
- D. Rs.6400

Answer: A

Explanation:





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$$\begin{aligned}A &= 20000\left(\frac{11}{10}\right)^3 \\ &= 26620 \\ &= 20000 \\ &6620\end{aligned}$$

16. Rs.8000 become Rs.9261 in a certain interval of time at the rate of 5% per annum of C.I. Find the time?

- A. 4 years
- B. 6 years
- C. 2 years
- D. 3 years

Answer: D

Explanation:

$$9261 = 8000\left(\frac{21}{20}\right)^N$$

$$\left(\frac{21}{20}\right)^3 = \left(\frac{21}{20}\right)^N = N = 3$$

17. The cost price of a radio is Rs.1500 and it was sold for Rs.1230, find the loss %?

- A. 18%
- B. 9%
- C. 15%
- D. 6%

Answer: A

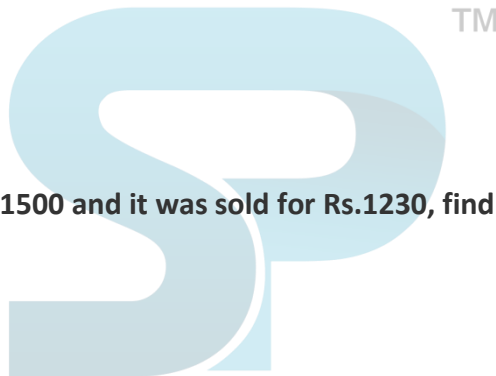
Explanation:

$$1500 \text{ ---- } 270$$

$$100 \text{ ---- } ? \Rightarrow 18\%$$

18. A watch was sold at a loss of 10%. If it was sold for Rs.140 more, there would have been a gain of 4%. What is the cost price?

- A. Rs.1000
- B. Rs.1140
- C. Rs.860





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D. Rs.760

Answer: A

Explanation:

90%

104%

14% ---- 140

100% ---- ? => Rs.1000

**19. A mixture of 150 liters of wine and water contains 20% water. How much more water should be added so that water becomes 25% of the new mixture?**

- A. 7 liters
- B. 15 liters
- C. 10 liters
- D. 9 liters

Answer: C

Explanation:

Number of liters of water in 150 liters of the mixture = 20% of 150 =  $\frac{20}{100} * 150 = 30$  liters.

P liters of water added to the mixture to make water 25% of the new mixture.

Total amount of water becomes (30 + P) and total volume of mixture is (150 + P).

$$(30 + P) = \frac{25}{100} * (150 + P)$$

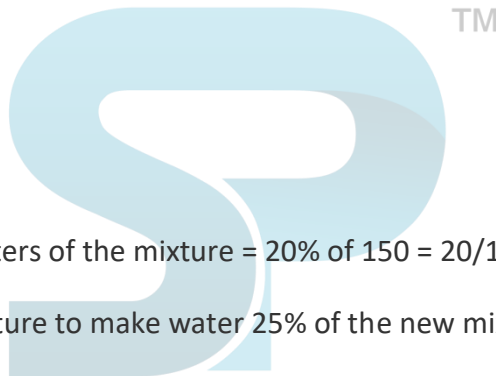
$$120 + 4P = 150 + P \Rightarrow P = 10 \text{ liters}$$

**20. A vessel contains 20 liters of a mixture of milk and water in the ratio 3:2. 10 liters of the mixture are removed and replaced with an equal quantity of pure milk. If the process is repeated once more, find the ratio of milk and water in the final mixture obtained?**

- A. 9:1
- B. 4:7
- C. 7:1
- D. 2:5

Answer: A

Explanation:





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Milk =  $\frac{3}{5} * 20 = 12$  liters, water = 8 liters

If 10 liters of mixture are removed, amount of milk removed = 6 liters and amount of water removed = 4 liters.

Remaining milk =  $12 - 6 = 6$  liters

Remaining water =  $8 - 4 = 4$  liters

10 liters of pure milk are added, therefore total milk =  $(6 + 10) = 16$  liters.

The ratio of milk and water in the new mixture =  $16:4 = 4:1$

If the process is repeated one more time and 10 liters of the mixture are removed, then amount of milk removed =  $\frac{4}{5} * 10 = 8$  liters.

Amount of water removed = 2 liters.

Remaining milk =  $(16 - 8) = 8$  liters.

Remaining water =  $(4 - 2) = 2$  liters.

The required ratio of milk and water in the final mixture obtained =  $(8 + 10):2 = 18:2 = 9:1$ .

**21. If the sides of a triangle are 26 cm, 24 cm and 10 cm, what is its area?**

- A.  $120 \text{ cm}^2$
- B.  $130 \text{ cm}^2$
- C.  $312 \text{ cm}^2$
- D.  $315 \text{ cm}^2$

Answer: A

Explanation:

The triangle with sides 26 cm, 24 cm and 10 cm is right angled, where the hypotenuse is 26 cm.

Area of the triangle =  $\frac{1}{2} * 24 * 10 = 120 \text{ cm}^2$

**22. Find the area of a parallelogram with base 24 cm and height 16 cm.**

- A.  $262 \text{ cm}^2$
- B.  $384 \text{ cm}^2$
- C.  $192 \text{ cm}^2$
- D.  $131 \text{ cm}^2$

Answer: B



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Explanation:

Area of a parallelogram = base \* height = 24 \* 16 = 384 cm<sup>2</sup>

**23. The length of a rectangular plot is thrice its breadth. If the area of the rectangular plot is 867 sq m, then what is the breadth of the rectangular plot?**

- A. 8.5 m
- B. 17 m
- C. 34 m
- D. 51 m

Answer: B

Explanation:

Let the breadth of the plot be b m.

Length of the plot = 3 b m

$$(3b)(b) = 867$$

$$3b^2 = 867$$

$$b^2 = 289 = 17^2 \quad (b > 0)$$

$$b = 17 \text{ m.}$$

**24. If  $\cos \theta + \sec \theta = 2$ , the value of  $\cos^6 \theta + \sec^6 \theta$  is**

- A. 4
- B. 8
- C. 1
- D. 2

Answer: B

Explanation:

$$\cos \theta + \sec \theta = 2$$

$$\text{put } \theta = 0^\circ$$

$$\cos 0^\circ + \sec 0^\circ = 2$$

$$(\cos 0^\circ = 1 \text{ and } \sec 0^\circ = 1)$$

$$1 + 1 = 2$$





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$$2 = 2$$

$$\cos^6 \theta + \sec^6 \theta$$

$$= (1)^6 + (1)^6$$

$$= 1 + 1 = 2$$

25.  $\sin^2 20^\circ + \sin^2 70^\circ - \tan^2 45^\circ = ?$

- A. 2
- B. 0
- C. 1
- D.  $\frac{1}{2}$

Answer: B

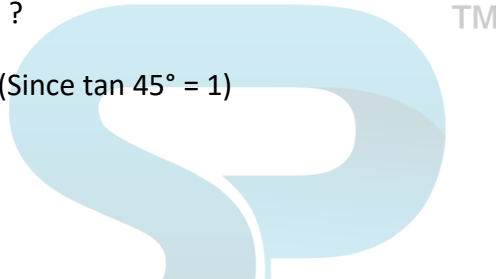
Explanation:

$$\sin^2 20^\circ + \sin^2 70^\circ - \tan^2 45^\circ = ?$$

$$\Rightarrow \sin^2 (90^\circ - 70^\circ) + \sin^2 70^\circ - 1 \text{ (Since } \tan 45^\circ = 1)$$

$$\Rightarrow \cos^2 70^\circ + \sin^2 70^\circ - 1$$

$$\Rightarrow 1 - 1 = 0$$

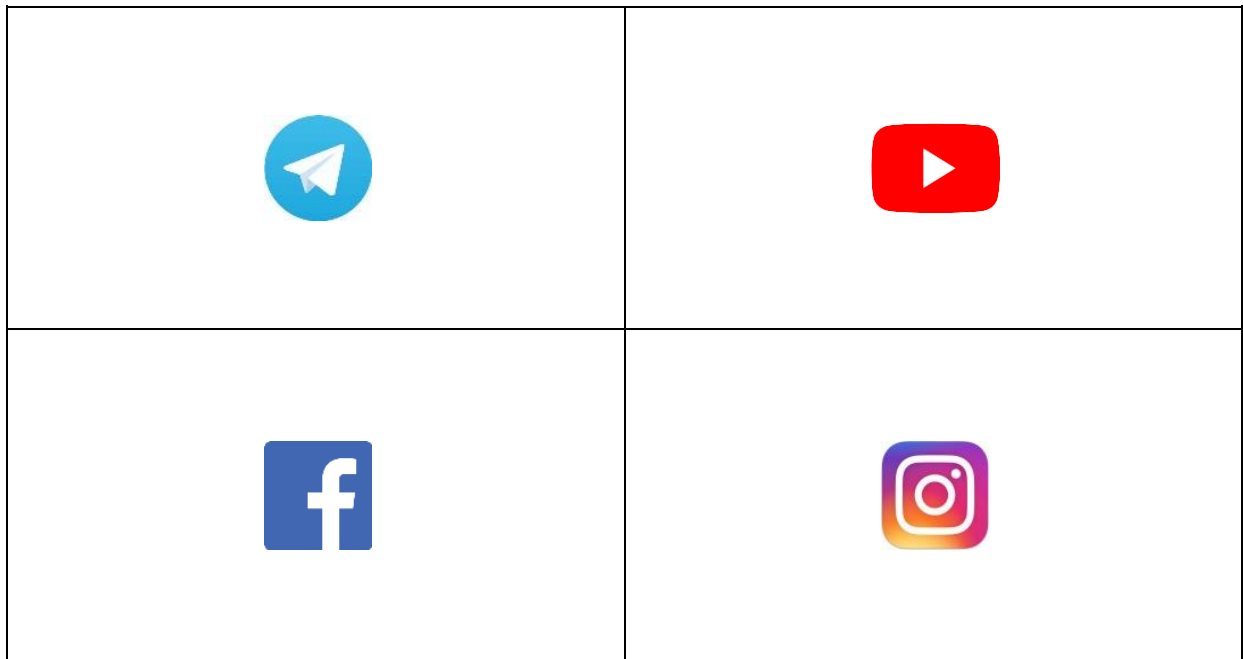


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