BLOGS

Sectional Test on Quantitative Techniques for CLAT UG [Part 18]

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1. The average of 12 numbers is 36. If the average of 8 numbers is 34, find the average of the remaining numbers.

a. 38

b. 40

c. 42

d. 44

2. A sum becomes ₹8,800 in 4 years and ₹9,600 in 5 years at simple interest. Find the rate of interest per year.

a. 8%

b. 10.5%

c. 14.28%

d. 15%

3. The ratio of two numbers is 5 : 7 and their sum is 144. Find the greater number.

a. 70

b. 72

c. 84

d. 96

4. A train running at 72 km/h crosses a platform 240 m long in 30 seconds. Find the length of the train.

a. 300 m

b. 360 m

c. 420 m

d. 480 m

5. If the cost price of 20 items equals the selling price of 16 items, find the profit percentage.

a. 20%

b. 25%

c. 30%

d. 35%

6. A number is increased by 20% and then decreased by 10%. What is the net percentage change?

a. 8% increase

b. 10% increase

c. 12% increase

d. 6% increase

7. A bag contains 4 red, 6 blue, and 10 green balls. What is the probability of selecting a blue ball?

a. 3/110

b. ⅕

c. ⅓

d. ⅖

8. A mixture of milk and water is in the ratio 4 : 3. If 7 litres of water are added, the ratio becomes 4 : 5. Find the original quantity of the mixture.

a. 28 L

b. 35 L

c. 42 L

d. 49 L

9. Two numbers are in the ratio 3 : 5 and their sum is 128. Find the smaller number.

a. 40

b. 45

c. 48

d. 52

10. A boat travels 24 km downstream in 3 hours and the same distance upstream in 4 hours. Find the speed of the boat in still water.

a. 6 km/h

b. 7 km/h

c. 8 km/h

d. 9 km/h

11. The side of a square is increased by 20%. By what percentage does the area increase?

a. 36%

b. 40%

c. 44%

d. 48%

12. The average of 10 numbers is 30. If each number is increased by 5, find the new average.

a. 32

b. 33

c. 34

d. 35

13. A trader marks his goods 25% above cost price and gives a discount of 10%. Find the profit percentage.

a. 10%

b. 12.5%

c. 15%

d. 20%

14. If the radius of a circle is increased by 20%, find the percentage increase in its area.

a. 40%

b. 42%

c. 44%

d. 48%

15. The present ages of A and B are in the ratio 3 : 4. After 5 years, their ratio becomes 4 : 5. Find A’s present age.

a. 12

b. 15

c. 18

d. 20

Answers

1. Correct Answer: B

Total = 12 × 36 = 432

Sum of 8 numbers = 8 × 34 = 272

Remaining sum = 432 − 272 = 160

Average = 160/4 = **40**

2. Correct Answer: C

Difference = 9600 − 8800 = 800 (1 year interest)

Principal = 8800 − (4 × 800) = 5600

Rate = (800 × 100)/5600 = **14.28%**

3. Correct Answer: C

Total parts = 12

1 part = 144/12 = 12

Greater number = 7 × 12 = **84**

4. Correct Answer: B

Speed = 72 km/h = 20 m/s

Distance covered = 20 × 30 = 600 m

Train length = 600 − 240 = **360 m**

5. Correct Answer: B

CP of 20 = SP of 16

CP/SP = 16/20 = ⅘

Profit = **25%**

6. Correct Answer: A

100 × 1.20 = 120

120 × 0.90 = 108

Increase = (120-108) × 100 = **8% increase**

7. Correct Answer: A

Blue balls = 6

Total = 20

Probability = 6/20 = **3/10**

8. Correct Answer: B

Ratio change: 4:3 → 4:5

Water increases by 2 parts = 7 L

1 part = 3.5

Total parts = 7

Mixture = 7 × 5 **= 35 L**

9. Correct Answer: C

Total parts = 8

1 part = 128/8 = 16

Smaller = 3 × 16 = **48**

10. Correct Answer: B

Downstream = 24/3 = 8

Upstream = 24/4 = 6

Boat speed = (8 + 6)/2 = **7 km/h**

11. Correct Answer: C

Area factor = $(1.2)^2$ = 1.44

Increase = **44%**

12. Correct Answer: D

Average increases by the same amount

30 + 5 = **35**

13. Correct Answer: B

Marked price = 125

After 10% discount → 112.5

Profit = (125-112.5) × 100 = **12.5%**

14. Correct Answer: C

Area ∝ r^2

$(1.2)^2$ = 1.44

Increase = **44%**

15. Correct Answer: B

Let ages = 3x, 4x

(3x + 5)/(4x + 5) = ⅘

Solve → $x = 5$

$A = 3 \times 5 = \mathbf{15}$