

GRE Prep

Percentages and Ratio



Percentages and Ratio

Percentages and Ratio

1. On July 1, the ratio of men to women in Club X was 9 to 20. During the month, 2 additional men and 2 additional women joined the Club and no members dropped out. The ratio of men to women in Club X at the end of July is?
- A. 9:20
 - B. 1:2
 - C. 1:3
 - D. 11:20
 - E. Cannot be determined.



Percentages and Ratio

2. If a small juice can contain 200 millilitres of juice, how many litres of juice are there in a case containing 48 small cans? (1 litre = 1000 millilitre)
- A. 0.96
 - B. 9.6
 - C. 96
 - D. 960
 - E. 9,600



Percentages and Ratio

3. If $a : b = 2 : 5$, what is the ratio of $(3a+4b)$ and $(4a+5b)$?

Percentages and Ratio

4. In a mixture of 28 litres, the ratio of milk and water is 5:2. If 2 litres of water is added to the mixture, what is the ratio of milk and water in the new mixture?

Percentages and Ratio

5. A sum of Rs.7000 is divided among A, B, C in such a way that shares of A and B are in the ratio 2:3 and those of B and C are in the ratio 4:5. What amount does C receive?



Percentages and Ratio

6. At College X, the faculty-to-student ratio is 1:9. If two-thirds of the students are female and one-quarter of the faculty is female, what fraction of the combined students and faculty is female?



Percentages and Ratio

7. There was a series of two successive discounts of $x\%$ on the price of a shirt. The final price of the shirt was tagged at 64% of the original price. What is the value of x ?
- A. 10%
 - B. 20%
 - C. 22%
 - D. 28%
 - E. 32%



Percentages and Ratio

8. If the length and the width of a rectangular garden plot were each increased by 20 percent, what would be the percent increase in the area of the plot?
- A. 20%
 - B. 24%
 - C. 36%
 - D. 40%
 - E. 44%



Percentages and Ratio

9. During a certain season, a team won 80 percent of its first 100 games and 50 percent of its remaining games. If the team won 70 percent of its games for the entire season, what was the total number of games that the team played?
- A. 180
 - B. 170
 - C. 156
 - D. 150
 - E. 105



Percentages and Ratio

10. During a two-week period, the price of an ounce of silver increased by 25 percent by the end of the first week and then decreased by 20 percent of this new price by the end of the second week. If the price of silver was x dollars per ounce at the beginning of the two-week period, what was the price, in dollars per ounce, by the end of the period?
- A. $0.8x$
 - B. $0.95x$
 - C. x
 - D. $1.05x$
 - E. $1.25x$



Percentages and Ratio

11. How much silver valued at \$4 per gram must be mixed with gold valued at \$24 per gram to obtain 30 grams of an alloy worth \$12 per gram?



Percentages and Ratio

12. A 200-gram solution is 75% salt. How much pure water must be added to produce a solution that is 60% salt?



Percentages and Ratio

13. A rabbit on a controlled diet is fed daily 300 grams of a mixture of two foods, food X and food Y. Food X contains 10 percent protein and food Y contains 15 percent protein. If the rabbit's diet provides exactly 38 grams of protein daily, how many grams of food X are in the mixture?
- A. 100
 - B. 140
 - C. 150
 - D. 160
 - E. 200



Percentages and Ratio

14. Cone V_2 is obtained by increasing the radius of a cone V_1 by 20% and decreasing the height by 20%.

Quantity A

Volume of V_1

Quantity B

Volume of V_2



Percentages and Ratio

15. The original price of the laptop is \$990. The store offers her a series of two successive discounts: first, a 30% discount on the original price, and then an $x\%$ discount on the reduced price. This results in a net 50% discount on the original price of the laptop.

Quantity A

x

Quantity B

20



Percentages and Ratio

16. In 2010, the price of a house was \$ P . The price increased by 10% from 2010-2012, and then increased by an additional $y\%$ from 2012-2014, resulting in a net 25% increase from 2010-2014.

Quantity A

y

Quantity B

15



Percentages and Ratio

17. Cathy earns \$500 per week and saves 30% of her earnings, while spending the rest. David saves 20% less than Cathy, and spends 10% more than what Cathy spends.

Quantity A

David's earnings (in \$) per
week

Quantity B

500



Percentages and Ratio

18. Karen bought a smartphone for x dollars, which included a 9% sales tax on the discounted price. The discounted price was 15% less than the regular price.

Quantity A

The regular price of the
smartphone

Quantity B

$$\frac{x}{(1.09)(0.85)}$$



Percentages and Ratio

19.

Quantity A

30 times of m percent of
 $250y$

Quantity B

150% of y times of $50m$



Percentages and Ratio

20. The price of a camera was decreased by $x\%$ and then decreased by $y\%$ to make it the same as the price of another camera. The same change could have been brought by just decreasing the price of the camera by $z\%$.

Quantity A

$$x + y$$

Quantity B

$$z$$



Percentages and Ratio

21. 60% of the total workers in a factory are men and 40% are women. 8% of the male workers and 12% of the female workers got promoted.

Quantity A

The percentage of the total workers who got promoted

Quantity B

10



Percentages and Ratio

22. How many ounces of pure water must be added to 20 ounces of a 10% salt solution to produce a 6% salt solution?



Percentages and Ratio

23. John wants to buy a laptop and has a budget of \$1,200. He finds a laptop that is being sold at a 25% discount on the marked price.

Quantity A

The maximum possible marked price of the laptop in dollars that John can afford

Quantity B

1,500



Percentages and Ratio

24. $\frac{3x}{7} = \frac{5ab^3}{c^2}$, where a , b , and c are positive constant.

Quantity A

The percent increase in the values of x if a is doubled and c is halved

Quantity B

700





Thank you