Faahiye

1. 1. Express the ratio 12:16 in its simplest form:

The ratio 12:16 simplified is 3:4.

1. 2. Divide $120 in the ratio 2:3:

Total parts = 2 + 3 = 5.  
Share for 2 = (2/5) × 120 = $48.  
Share for 3 = (3/5) × 120 = $72.

1. 3. The ratio of cats to dogs is 4:7. If there are 28 dogs, how many cats are there?

7 parts = 28 dogs → 1 part = 28 ÷ 7 = 4.  
Number of cats = 4 × 4 = 16 cats.

1. 4. If a person earns $240 for 8 hours, what is the rate per hour?

Rate per hour = 240 ÷ 8 = $30 per hour.

1. 5. Are the ratios 6:9 and 8:12 proportional?

6/9 = 2/3, 8/12 = 2/3 → since both are equal, yes, they are proportional.

1. 6. If 3 shirts cost $45, how much do 5 shirts cost?

Cost per shirt = 45 ÷ 3 = $15.  
Cost for 5 shirts = 5 × 15 = $75.

1. 7. If 5 pens cost $10, how much do 12 pens cost?

Cost per pen = 10 ÷ 5 = $2.  
Cost for 12 pens = 12 × 2 = $24.

1. 8. A class has 18 boys and 12 girls. What is the ratio of boys to total students?

Total students = 18 + 12 = 30.  
Ratio = 18:30 = 3:5.

1. 9. Find 25% of 480:

25% × 480 = 0.25 × 480 = 120.

1. 10. A jacket is sold for $150 after a 20% discount. What was the original price?

Original price = x.  
80% of x = 150 → x = 150 ÷ 0.8 = $187.50.

1. 11. A salesperson earns 5% commission on $2,000 sales. How much commission?

Commission = 0.05 × 2000 = $100.

1. 12. If 60% of a number is 180, what is the original number?

0.6 × number = 180 → number = 180 ÷ 0.6 = 300.

1. 13. Find simple interest on $1,200 at 5% for 3 years:

I = 1200 × 5 × 3 ÷ 100 = $180.

1. 14. $2,000 invested at 10% for 3 years compounded annually. Find total amount:

A = 2000(1 + 0.10)^3 = 2000 × 1.331 = $2,662.

1. 15. A loan of $2,000 at 6% for 2 years. Total amount to be repaid?

I = 2000 × 6 × 2 ÷ 100 = $240.  
Total = 2000 + 240 = $2,240.