**1. Express the ratio 12:16 in its simplest form.**  
12 ÷ 4 = 3, 16 ÷ 4 = 4 Ans: 3:4

**2. Divide $120 in the ratio 2:3.**  
Total parts = 2 + 3 = 5  
Each part = $120 ÷ 5 = $24

2 × $24 = $48, 3 × $24 = $72

Ans: $48 and $72

**3. The ratio of cats to dogs is 4:7. If there are 28 dogs, how many cats are there?**  
4÷ 7 \*x÷ 28 7x=112 divide each side 7 x=16

Ans: 16 cats

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

240/8=30

Ans: $30 per hour

**5. Are the ratios 6:9 and 8:12 proportional?**  
  
6:9 = 2:3, 8:12 = 2:3 Ans: Yes, they are proportional

**6. If 3 shirts cost $45, how much would 5 shirts cost at the same rate?**  
Cost per shirt = 45 ÷ 3 = 15  
5 shirts = 5 × 15 = $75

Ans: $75

**7. If 5 pens cost $10, how much do 12 pens cost?**  
Cost per pen = $10 ÷ 5 = $2  
12 pens = 12 × $2 = $24

Ans: $24

**8. A class has 18 boys and 12 girls. What is the ratio of boys to the total number of students?**  
Total students = 18 + 12 = 30  
Ratio of boys to total = 18:30  
Simplify: Divide both by 6 → 3:5 → Answer: 3:5

**9. Find 25% of 480.**

25/100×480=120

Answer: 120

**10. A jacket is sold for $150 after a 20% discount. What was the original price?**  
Let original price = x  
20% discount means 80% of the price = $150

0.8x=150 divide each side 0.8 to get x so answer is =187.5

Answer: $187.50

**11. A salesperson earns a 5% commission on sales. If they sell goods worth $2,000, how much commission do they earn?**

5/100×2000=100

Answer: $100

**12. If 60% of a number is 180, what is the original number?**  
Let the number be x*x*:

0.6x=180 divide each side 0.6 ⇒ 300

Answer: 300

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

SI=P×R×T

1200×0.05×3=180

Answer: $180

**14. A sum of $2,000 is invested at 10% per annum for 3 years compounded annually. Find the total amount.**

So first year it becomes 2,000\*0.1=200 amount of end year 2,200

then second year it becomes 2,200\*0.1=220 amount of end year 2,420

third third it becomes 2,420\*0.1=242 amount of end year 2,662

Ans:$2,662

**15. A loan of $2,000 is given for 2 years at a rate of 6% per annum. What is the total amount to be repaid at the end of the period?**

SI=2000×0.06×2=240

Totalamount=2000+240=2240

Answer: $2240