Here are the answers to the math assignment questions from the image:

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

? 12:16 = 3:4 (divide both by 4)

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

? Total parts = 2 + 3 = 5

? 2 parts = (2/5) × 120 = $48

? 3 parts = (3/5) × 120 = $72

? Answer: $48 and $72

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

? 7 parts = 28 dogs ? 1 part = 4

? Cats = 4 × 4 = 16 cats

4. $240 for 8 hours. Rate per hour?

? $240 ÷ 8 = $30 per hour

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

? 6:9 = 2:3 and 8:12 = 2:3

? Yes, they are proportional.

6. If 3 shirts cost $45, how much would 5 shirts cost at the same rate?

? 1 shirt = $15 ? 5 shirts = 5 × $15 = $75

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

? 1 pen = $2 ? 12 pens = 12 × $2 = $24

8. 18 boys and 12 girls. Ratio of boys to total students?

? Total = 30 ? Ratio = 18:30 = 3:5

9. Find 25% of 480:

? 25% = 0.25 × 480 = 120

10. Jacket sold for $150 after 20% discount. Original price?

? Let original price = x

? x - 0.2x = 150 ? 0.8x = 150 ? x = 150 ÷ 0.8 = $187.50

11. 5% commission on $2,000 sales:

? 0.05 × 2000 = $100

12. 60% of a number is 180. What is the original number?

? 0.6 × x = 180 ? x = 180 ÷ 0.6 = 300

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

? SI = (P × R × T)/100 = (1200 × 5 × 3)/100 = $180

14. Compound interest: $2,000 at 10% p.a. for 3 years (compounded annually):

? A = P(1 + r)^t = 2000(1 + 0.10)^3

? A = 2000 × 1.331 = $2662

? Total amount = $2662

15. Loan of $2,000 at 6% for 2 years (simple interest):

? SI = (2000 × 6 × 2)/100 = $240

? Total repayment = 2000 + 240 = $2240

Let me know if you'd like the answers formatted for submission or explained in more detail.