# ALPHA UNIVERSITY BORAMA

Assignment of Math’s Methods

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1.  
Express the ratio 12:16 in its simplest form: → 3:4

2.  
Divide $120 in the ratio 2:3:  
Total parts = 2 + 3 = 5  
Each part = $120 ÷ 5 = $24  
2 parts = $48, 3 parts = $72 → $48 and $72

3.  
The ratio of cats to dogs is 4:7. If there are 28 dogs, how many cats?  
Let cats be x → x = 16 → 16 cats

4.  
If a person earns $240 for 8 hours, what is the rate of pay per hour? → $30/hour

5.  
Are the ratios 6:9 and 8:12 proportional? → Yes, they are proportional

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

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

8.  
A class has 18 boys and 12 girls. Ratio of boys to total students?  
Total = 18 + 12 = 30  
Ratio = 3:5

9.  
Find 25% of 480: → 120

10.  
A jacket is sold for $150 after a 20% discount. What was the original price?  
Let original price be x → x − 0.2x = 150 → 0.8x = 150 → x = $187.50

11.  
5% commission on $2,000 sales: → $100 commission

12.  
If 60% of a number is 180, what is the original number?  
Let x be the number → x = 300

13.  
Simple interest on $1,200 at 5% for 3 years: → $180

14.  
Compound interest: $2,000 at 10% for 3 years compounded annually: → $2,662

15.  
Loan of $2,000 for 2 years at 6% per annum (simple interest):  
Total = 2000 + 240 = $2,240