ALPHA UNIVERSITY BORAMA

Assignment of math's methods

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The assignment

individual assignment the assignment ...30 marks submission date 05/05/2025

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

? 12:16 = 3:4

2. Divide $120 in the ratio 2:3

? $120 ÷ (2+3) = $24 per part

? 2 parts = $48, 3 parts = $72

Answer: $48 and $72

3. Ratio of cats to dogs is 4:7, dogs = 28

? 1 part = 28 ÷ 7 = 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; 8/12 = 2/3

Yes, they are proportional

6. 3 shirts cost $45, so 5 shirts cost?

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

7. 5 pens cost $10, 12 pens cost?

? 1 pen = $2; 12 pens = 12 × $2 = $24

8. Class: 18 boys, 12 girls ? Total = 30

? Ratio of boys to total = 18:30 = 3:5

9. Find 25% of 480

? 0.25 × 480 = 120

10. Jacket sold for $150 after 20% discount

? Let original price = x

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

11. 5% commission on $2000

? 0.05 × 2000 = $100

12. 60% of a number is 180

? 0.6x = 180 ? x = 180 ÷ 0.6 = 300

13. Simple interest: $1200, 5% per annum, 3 years

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

14. Compound interest: $2000, 10% p.a., 3 years

? $A = P(1 + r)^t = 2000(1.10)^3 = 2000 \times 1.331 = \$2662$

? $CI = 2662 - 2000 = \$662$

15. Loan: $2000, 6% p.a., 2 years, simple interest

? $SI = (2000 \times 6 \times 2)/100 = \$240$

? Total repayment $= 2000 + 240 = \$2240$