# ALPHA UNIVERSITY BORAMA

Assignment of Math’s Methods

Individual Assailment - 30 Marks

Submission Date: 05-05-2025

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Faculty: \_\_\_\_\_\_\_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_\_\_

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

Answer: 12:16 = 3:4

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

Answer: $48 and $72

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

Answer: 16 cats

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

Answer: $30/hour

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

Answer: Yes, both simplify to 2:3

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

Answer: $75

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

Answer: $24

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

Answer: 3:5

1. 9. Find 25% of 480.

Answer: 120

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

Answer: $187.50

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

Answer: $100

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

Answer: 300

1. 13. Find the simple interest on $1,200 at a rate of 5% per annum for 3 years.

Answer: $180

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

Answer: $2,662

1. 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?

Answer: $2,240