ALPHA UNIVERSITY BORAMA

Assignment of math's methods

Name: …………………………………… faculty………… ID………

The assignment

Individual assailment the assignment 30 marks

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Express the ratio 12:16 in its simplest form.

Divide $120 in the ratio 2:3.

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

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

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

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

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

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

Find 25% of 480.

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

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

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

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

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

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?

Answers:

1. 12:16 simplifies to 3:4.

2. $120 divided in the ratio 2:3 = $48 and $72.

3. If there are 28 dogs and the ratio of cats to dogs is 4:7, then there are 16 cats.

4. $240 ÷ 8 hours = $30 per hour.

5. 6:9 = 2:3 and 8:12 = 2:3, so yes, they are proportional.

6. If 3 shirts cost $45, then 1 shirt costs $15. So, 5 shirts cost $75.

7. If 5 pens cost $10, then 1 pen costs $2. So, 12 pens cost $24.

8. Total students = 18 + 12 = 30. Ratio of boys to total = 18:30 = 3:5.

9. 25% of 480 = 0.25 × 480 = 120.

10. Let the original price be x. After 20% discount: x - 0.2x = 150 ? 0.8x = 150 ? x = $187.50.

11. 5% of $2,000 = 0.05 × 2,000 = $100.

12. Let the number be x. 0.6x = 180 ? x = 180 / 0.6 = 300.

13. Simple Interest = (1200 × 5 × 3)/100 = $180.

14. Compound Interest formula: A = P(1 + r/100)^t ? A = 2000(1 + 0.10)^3 = $2,662.

15. Simple Interest = (2000 × 6 × 2)/100 = $240 ? Total = 2000 + 240 = $2,240.