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**ALPHA UNIVERSITY BORAMA**

**Assignment of math’s meth**

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

Answer: The simplest form is 3 to 4.

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

**Answer: $72 and $48**

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: There are 16 cats.**

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

**Answer: The hourly rate is $30.**

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: 5 shirts would cost $75.**

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

**Answer: 12 pens would cost $24.**

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

Answer: The ratio is 3 out of 5.

1. 9. Find 25% of 480.

**Answer: It is 120.**

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

**Answer: Original price = $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: They earn $100 commission.**

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

**Answer: The number is 300.**

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

**Answer: Simple interest = $180**

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

**Answer: Final amount is $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: They will repay $2,240 in total**.