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Assignment of math's methods

Answers

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

Divide both terms by their GCD (4):= 3:4

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

Total parts = $2 + 3 = 5$

Each part = $\$120 \div 5 = \24

First share = $2 \times 24 = \$48$

Second share = $3 \times 24 = \$72$

Answer will be: \$48 and \$72

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

7 parts = 28 dogs ? 1 part = 4

Cats = $4 \times 4 = 16$

Answer: 16 cats

4. If a person earns \$240 for 8 hours, rate per hour:

$\$240 \div 8 = \$30/\text{hour}$

Answer: \$30 per hour

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

$$6 \div 9 = 2/3, 8 \div 12 = 2/3 \text{ ? Same ratio}$$

Answer: Yes, they are proportional

6. If 3 shirts cost \$45, how much for 5 shirts?

$$\text{Cost per shirt} = \$45 \div 3 = \$15$$

$$5 \text{ shirts} = 5 \times \$15 = \$75$$

Answer: \$75

7. If 5 pens cost \$10, how much for 12 pens?

$$\text{Cost per pen} = \$10 \div 5 = \$2$$

$$12 \text{ pens} = 12 \times \$2 = \$24$$

Answer: \$24

8. 18 boys and 12 girls, ratio of boys to total:

$$\text{Total} = 18 + 12 = 30$$

$$\text{Ratio} = 18:30 \text{ ? Simplify } (\div 6): 3:5$$

Answer: 3:5

9. Find 25% of 480:

$$25\% = \frac{1}{4}$$

$$\frac{1}{4} \text{ of } 480 = 480 \div 4 = 120$$

Answer: 120

10. A jacket is sold for \$150 after a 20% discount. Original price?

$$\text{Let original price} = x$$

$$\text{After 20\% discount: } 80\% \text{ of } x = \$150 \text{ ?}$$

$$0.8x = 150 \text{ ? } x = 150 \div 0.8 = \$187.50$$

Answer: \$187.50

11. 5% commission on \$2,000:

$$5\% \text{ of } \$2,000 = (5/100) \times 2000 = \$100$$

Answer: \$100

12. 60% of a number is 180. Find the number:

$$60\% = 0.6 \quad ? \quad 0.6x = 180 \quad ? \quad x = 180 \div 0.6 = 300$$

Answer: 300

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

$$SI = (P \times R \times T)/100 = (1200 \times 5 \times 3)/100 = 180$$

Answer: \$180

14. Compound interest on \$2,000 at 10% for 3 years:

$$A = P(1 + r)^t = 2000 \times (1.1)^3 = 2000 \times 1.331 = \$2,662$$

Answer: \$2,662

15. Loan of \$2,000 for 2 years at 6% simple interest:

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

$$\text{Total} = 2000 + 240 = \$2,240$$

Answer: \$2,240

THANKS TO YOU ALL

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