

Mathematical method assignment

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Answer

Express the ratio 12:16 in its simplest form.

$$12:16 = 3:4 \text{ (Labada tiroba 4 ayaa la isku qaybin karaa)}$$

Divide \$120 in the ratio 2:3.

$$\text{Wadarta saamiga} = 2 + 3 = 5$$

$$\text{Qaybta 1aad: } 25 \times 120 = 48 \frac{2}{5} \times 120 = 48 \times 25 = 1200$$

$$\text{Qaybta 2aad: } 35 \times 120 = 72 \frac{3}{5} \times 120 = 72 \times 35 = 2520$$

\$48 and \$72

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

$$7 \text{ qaybood} = 28$$

$$1 \text{ qaybood} = 4$$

$$\text{Markaa: } 4 \text{ qaybood} = 16 \text{ cats}$$

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

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

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

$$6/9 = 2/3$$

$$8/12 = 2/3$$

Haa, waa proportional

If 3 shirts cost \$45, how much would 5 shirts cost?

$$1 \text{ shirt} = \$15$$

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

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

$$1 \text{ pen} = \$2$$

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

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

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

$$\text{Ratio} = 18:30 = 3:5$$

Find 25% of 480.

$$0.25 \times 480 = 120$$

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

Let original be x .

$$80\% \text{ of } x = 150$$

$$0.8x = 150$$

$$x = 150 \div 0.8 = \$187.50$$

A salesperson earns 5% commission on \$2,000.

$$5\% \text{ of } 2000 = 0.05 \times 2000 = \$100$$

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

$$0.6x = 180$$

$$x = 180 \div 0.6 = 300$$

Find simple interest on \$1,200 at 5% for 3 years.

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

Compound interest: \$2,000 at 10% for 3 years (compounded annually)

Formula: $A = P(1 + r/100)^t$

$$A = 2000 \times (1 + 0.10)^3 = 2000 \times 1.331 = \$2662$$

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

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

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

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