

ALPHA UNIVERSITY BORAMA

Assignment of math's methods

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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?





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Answers

Divide both numbers by 4,

12 / 4 = 3

16 / 4 = 4

Therefore, the simplest form of the ratio 12:16 is 3:4.

To divide \$120 in the ratio 2:3

First

find the tota

1 number of parts in the ratio,

2 + 3 = 5.

Second find the value of one part by dividing the total amount by the total number of parts: 120 / 5 = 24.

Third

now

I can find the value of each part of the ratio:

2 parts ratios: 2 *

24 = \$48

3 parts ratios : 3 *

24 = \$72

So, \$120 divided in the ratio 2:3 is \$48 and \$72.

The ratio of cats are 4 and dogs are 7

So there are 16 cats in pet shop

To calculate the rate of person take per hour

Y

es, the ratios

6:9

and

8:12

are proportional

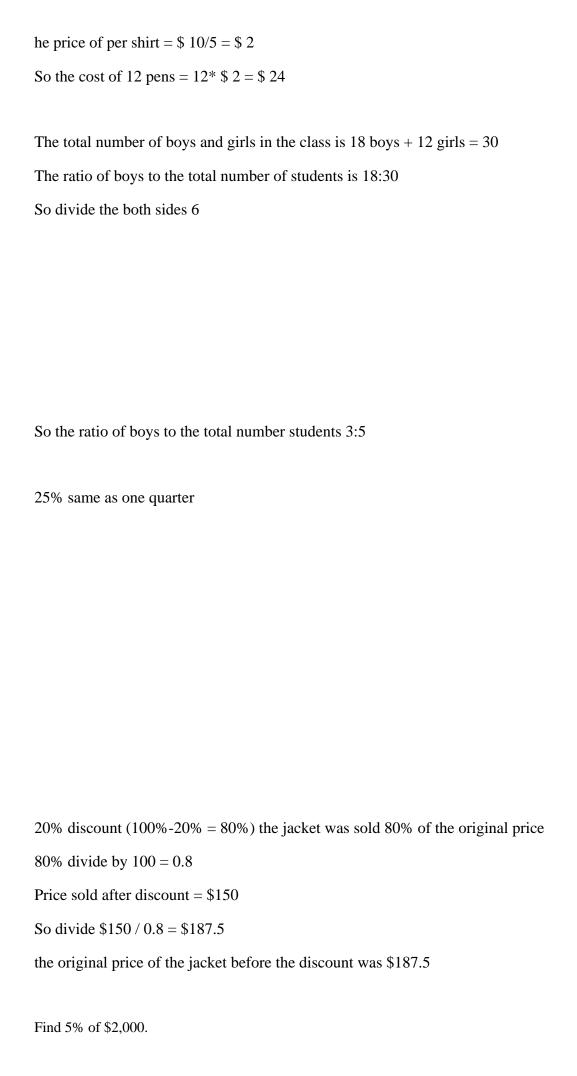
To know the cost of the 5 shirts when 3 shirts is 45\$

First calculate the price of per shirt = \$45/3 = \$15

Therefore the cost of 5 shirts = 5* \$ 15= \$ 75

To determine the cost of the 12 pens when 5 pens price are 10\$

First calculate t



5% /100 = 0.05.

So, the commission earned is 0.05 * \$2,000 = \$100.

Therefore, the salesperson earns a commission of \$100.

Let be x the original number so 60% of x equal to 180

60% divide by 100 = 0.6

So x = 180 / 0.6 = 300

the original number is 300

the simple interest calculation

principal (P) = 1200

Rate (R) = 5% = 0.05

Time (T) = 3 years

compound interest for total amount

Year	Amount at beginning of year	Compound interest	Amount of the end year
1	2000	10% *2000 =200	2000 +200 =2200
2	2200	10% * 2200= 220	2200+220 = 2420

3 2420	10% * 2420 =242	2420 + 242 = 2662	
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2000 *1.331 = 2662 so the total amount of 3 years is \$ 2662

the total amount to be repaid at the end of the period

year	Simple interest	Amount at the end of the year
1	\$2,000 * 0.06 =120	\$2000 + 120 =2120
2	\$2,000 * 0.06 = 120	\$2120 +120 =2240