

Percentage | Math

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1 Introduction

In these examples we will use:

- p to represent the percent.
- b to represent the base or quantity.
- n to represent the percentage.

2 Find percentage of a quantity

2.1 Example 1

What is 25% of 60? We know the percentage p 25, 60 is the base b , and we want to find the percentage n .

Then, the formula is:

$$\frac{n}{100} \times x = p$$

Substituting and solving:

- $\frac{25}{100} \times 60 = p$
- $0.25 \times 60 = p$
- $15 = p$

Therefore, 25% of 60 is 15, or 15 is 25% of 60.

3 Find the percent or ratio

3.1 Example 1

15 is what percent of 60?

We know that the percentage n is 15, and that the base or quantity b is 60. We want to find percent p .

Then, the formula is:

$$\frac{n}{b \times 100} = \frac{p}{100}$$

Substituting and solving:

- $\frac{15}{60} \times 100 = p$
- $0.25 \times 100 = p$
- $25 = p$

Therefore, 15 is 25% of 60.

4 Find the quantity from a percentage and percent

15 is 25% of what quantity?

We know the percentage n is 15, and that the percent p is 25. We want to find the base (or quantity) b .

The formula is:

$$\frac{n}{p} \times 100 = b$$

Substituting and solving:

- $\frac{15}{25} \times 100 = b$
- $0.6 \times 100 = b$
- $60 = b$

Therefore, 15 is 25% of 60.