Warm-up



Make the following percents a fraction:

a) 18% b) 3% c) 100% d) 34%

$\frac{18}{100}$ $\frac{3}{100}$ $\frac{100}{100} = 1$ $\frac{34}{100}$

Make the following decimals a percent:

a) 0.01 b) 0.65 c) 0.987 d) 0.012

0.01×100

1%

0.65×100

65%

0.987×100

98.7%

0.012×100

1.2 %

Make the following fractions a percent

$\frac{10 \times 5}{20 \times 5} = \frac{50}{100}$ $\frac{5}{9}$

$\frac{50}{100} = 0.50 = 50\%$

$9\overline{)5.00}$

$-45\downarrow$

50

0.5×100

50%

Write these down

new

How Fractions, Ratios, Percents, and DECIMALS Are Related

1. All four represent PARTS OF A WHOLE

- Fractions, decimals, ratios, and percents are just *different ways* of showing the **same value**.
- They all tell us **how many parts we have** out of the **total number of parts**.

2. Percents

- Percent means **"per 100"**
- So a percent *is the same as* a fraction out of 100.
- Examples:
- $25\% = \frac{25}{100}$
- Whenever the denominator is 100, the percent is just the **top number**.

4. Ratios

A ratio compares two quantities.

When we write ratios like **part : whole**, they can also be connected to fractions and percents.

Examples:

- 25:100

These are the same as:

- **25** (fraction)
  100

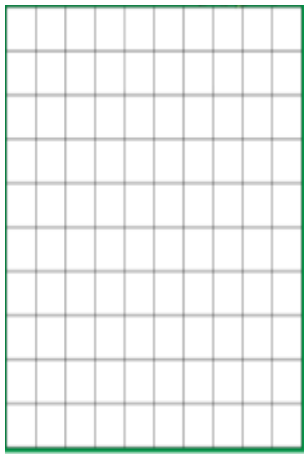
5. Decimals

Decimals are another way to show **parts of 10 or 100**.

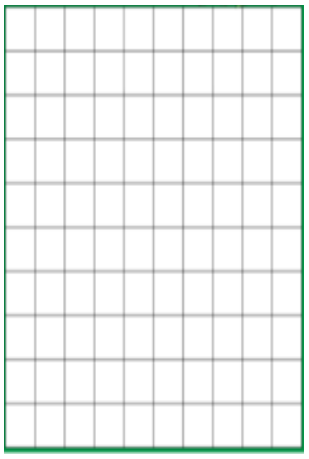
- The **tenths place** is out of 10
- The **hundredths place** is out of 100
- Examples:
- $0.25 = \frac{25}{100} = 25\%$
- If a decimal has **two digits** after the decimal (like 0.34), it is always out of **100**.

8. Write as a percent. Then write as a decimal.

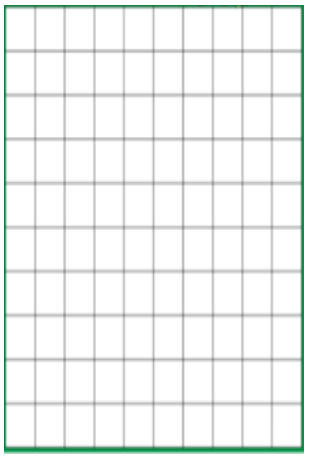
a) 64 out of 100



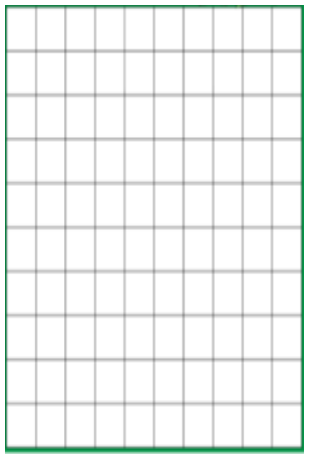
b) $\frac{50}{100}$



c) 1 out of 100



d) $\frac{17}{100}$



How to Convert Between Forms

Fraction → Percent

If the fraction is out of 100:

top number = percent

Example: $\frac{34}{100} = 34\%$

Percent → Fraction

Write it over 100:

Example:

$82\% = \frac{82}{100}$

How to Convert Between Forms

Decimal → Percent

Move the decimal **two places right**.

Example:

0.41 → 41%

Percent → Decimal

Move the decimal **two places left**.

Example:

66% → 0.66

Make the following percents a fraction:

a) 18% b) 3% c) 100% d) 34%

Make the following decimals a percent:

a) 0.01 b) 0.65 c) 0.987 d) 0.012

Make the following fractions a percent

$\frac{10}{20}$ $\frac{5}{9}$

$\frac{4}{7}$ $\frac{3}{7}$ 97%

$\frac{96}{100}$ $\frac{4}{100}$ 3%

13. Salvo said that of the 100 singers in a children's choir in Whitehorse, 62% are girls and 48% are boys.
Is this possible?
Use words and pictures to explain.