Fractions, Decimals, Percentages - Homework

You should know these conversions by heart:

$$\frac{1}{2} = 0.5 = 50\%$$

$$\frac{1}{4} = 0.25 = 25\%$$

$$\frac{3}{4} = 0.75 = 75\%$$

$$\frac{1}{3} = 0.\dot{3} = 33.\dot{3}\%$$

By considering place value (tenths, hundredths and thousandths), you can convert the rest on the spot.

For example, change $\frac{2}{5}$ into a decimal and percentage.

Start by making the denominator 10, 100 or 1000. In this case, we can multiply the numerator and denominator by 2,

$$\frac{2}{5} = \frac{4}{10}$$

This means $\frac{2}{5}$ is the same as 0.4 (since the 4 is in the tenths column).

We can easily change this into a percentage by multiplying by 100.

$$\frac{2}{5} = 0.4 = 40\%$$

Your Turn

1. Change each number into a decimal and percentage:

   a. $\frac{3}{10}$

   c. $\frac{4}{5}$

   e. $\frac{17}{20}$

   b. $\frac{17}{100}$

   d. $\frac{3}{25}$

2. Change each number into a fraction in its simplest form:

   a. 0.7

   c. 0.073

   e. 2%

   b. 0.009

   d. 37%

   f. 95%

3. By writing each number as a percentage, list in order of size (from smallest to largest):

   $$0.81, \ \frac{3}{4}, \ 64\%, \ \frac{13}{20}$$

Fractions, Decimals, Percentages - Homework Answers

You should know these conversions by heart:

$$\frac{1}{2} = 0.5 = 50\%$$

$$\frac{1}{4} = 0.25 = 25\%$$

$$\frac{3}{4} = 0.75 = 75\%$$

$$\frac{1}{3} = 0.\dot{3} = 33.\dot{3}\%$$

By considering place value (tenths, hundredths and thousandths), you can convert the rest on the spot.

For example, change $\frac{2}{5}$ into a decimal and percentage.

Start by making the denominator 10, 100 or 1000. In this case, we can multiply the numerator and denominator by 2,

$$\frac{2}{5} = \frac{4}{10}$$

This means $\frac{2}{5}$ is the same as 0.4 (since the 4 is in the tenths column).

We can easily change this into a percentage by multiplying by 100.

$$\frac{2}{5} = 0.4 = 40\%$$

Your Turn

1. Change each number into a decimal and percentage:

   a. $\frac{3}{10}$ **0.3, 30%**

   b. $\frac{17}{100}$ **0.17, 17%**

   c. $\frac{4}{5}$ **0.8, 80%**

   d. $\frac{3}{25}$ **0.12, 12%**

   e. $\frac{17}{20}$ **0.85, 85%**

2. Change each number into a fraction in its simplest form:

   a. 0.7 **$\frac{7}{10}$**

   b. 0.009 **$\frac{9}{1000}$**

   c. 0.073 **$\frac{73}{1000}$**

   d. 37% **$\frac{37}{100}$**

   e. 2% **$\frac{2}{100} = \frac{1}{50}$**

   f. 95% **$\frac{95}{100} = \frac{19}{20}$**

3. By writing each number as a percentage, list in order of size (from smallest to largest):

   $$0.81, \ \frac{3}{4}, \ 64\%, \ \frac{13}{20}$$

   81%, 75%, 64%, 65%

   In order of size: 64%, $\frac{13}{20}$, $\frac{3}{4}$, 0.81.