

6.1 Percents and Decimals

EQ: How do numbers change when you convert from decimal to percent and vice versa?

Percent: per → "divide" or "out of"
cent → 100

*Percent is always out of 100 ← denominator

Example 1: Percent → Decimal

Write 52% as a decimal

52.0%

$$\boxed{0.52} = 52\%$$

Write 7% as a decimal

07.0%

$$\boxed{.07} = 7\%$$

* moving the decimal to the left 2 times is the same thing as dividing by 100
per cent

- Steps
- place the decimal
 - move decimal 2 times to left
 - Remove % sign

Example 2: Decimal → Percent

Write .47 as a percent

$$\begin{array}{l} .47 \\ \hline 47\% \end{array} \quad ; \quad \frac{47}{100} \rightarrow 47\%$$

Write 0.663 as a percent

$$\begin{array}{l} .663 \\ \hline 66.3\% \end{array}$$

* moving the decimal 2 times to the right is the same thing as multiplying by 100

- Steps
- move the decimal 2 times to the right
 - Add % sign

Example 3: Write a fraction as a percent and decimal

$\frac{1}{4} \rightarrow$ decimal $\frac{1}{4}$ Percent $\frac{1}{4}$

$\frac{1}{4} \rightarrow 4 \overline{) 1.00}$
 $\begin{array}{r} 4 \overline{) 1.00} \\ \underline{8} \\ 20 \\ \underline{20} \\ 0 \end{array}$

$\frac{1}{4} \rightarrow \frac{25}{100}$
 $\begin{array}{r} 25 \\ \hline 100 \end{array}$

$\frac{25}{100} \leftarrow \begin{array}{l} 25 \leftarrow 25 \times 25 \\ \hline 100 \leftarrow \text{per cent} \end{array}$

$\boxed{25\%}$