6.4 The Percent Equation

**The percent equation:**

\[
\text{part} = \left(\frac{\text{percent}}{\text{in fraction or decimal form}}\right) \cdot \text{whole}
\]

\[ \alpha = p \cdot w \]

**Example 1: Finding the part**

What is 24\% of 50?

\[ X = \frac{24}{100} \cdot 50 \]
\[ X = \frac{24}{2} \cdot 1 \]
\[ X = 12 \]

12 is 24\% of 50

**Example 2: Finding the percent**

9.5 is what percent of 25?

\[ 9.5 = x \cdot 25 \]
\[ \frac{9.5}{25} = x \]
\[ x = 0.38 \]
\[ x = 38\% \]

9.5 is 38\% of 25

**Example 3: Finding the whole**

52\% of what number is 39?

\[ 39 = 0.52x \]
\[ \frac{39}{0.52} = x \]
\[ x = 75 \]

52\% of 75 is 39