

# PERCENTAGE ERROR

Name \_\_\_\_\_

Percentage error is a way for scientists to express how far off a laboratory value is from the commonly accepted value.

The formula is:

$$\text{ABSOLUTE ERROR} = E - A$$

$\begin{array}{l} \% \text{ error} = \left  \frac{\text{Accepted Value} - \text{Experimental Value}}{\text{Accepted Value}} \right  \times 100 \\ \rightarrow \\ \text{absolute value} \end{array}$
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OR

$$\frac{E - A}{A} \times 100$$

Then + means over and - means under accepted value

Determine the percentage error in the following problems.

1. Experimental Value = 1.24 g  
Accepted Value = 1.30 g

Answer: \_\_\_\_\_

2. Experimental Value =  $1.24 \times 10^{-2}$  g  
Accepted Value =  $9.98 \times 10^{-3}$  g

Answer: \_\_\_\_\_

3. Experimental Value = 252 mL  
Accepted Value = 225 mL

Answer: \_\_\_\_\_

4. Experimental Value = 22.2 L  
Accepted Value = 22.4 L

Answer: \_\_\_\_\_

5. Experimental Value = 125.2 mg  
Accepted Value = 124.8 mg

Answer: \_\_\_\_\_