

Measurements

A BRIEF REVIEW of the English System of Measurements:

Length	Weight	Capacity
1 foot (ft) = 12 inches (in)	1 pound (lb) = 16 ounces (oz)	1 pint (pt) = 16 fluid ounces (fl oz)
1 yard (yd) = 3 ft	1 ton = 2,000 lb	1 quart (qt) = 2 pt
1 mile (mi) = 5,280 ft		1 gallon (gal) = 4 qt

TRY: Use all you know about rates and complete the following.

$6 \text{ ft} = \underline{\hspace{2cm}} \text{ inches}$

$504 \text{ inches} = \underline{\hspace{2cm}} \text{ ft} = \underline{\hspace{2cm}} \text{ yards}$

$5 \text{ gallon} = \underline{\hspace{2cm}} \text{ quarts} = \underline{\hspace{2cm}} \text{ pints}$

Be sure to line up matching units when working with measurements. Convert units when it is necessary to borrow or carry.

Add:

$$\begin{array}{r}
 6 \text{ ft } 5 \text{ in} \\
 2 \text{ ft } 8 \text{ in} \\
 + 3 \text{ ft } 2 \text{ in} \\
 \hline
 11 \text{ ft } 15 \text{ in} \dots \text{ cannot leave this as } 15 \text{ in. It is } 1 \text{ ft } 3 \text{ in} \\
 \text{So carry the } 1 \text{ ft.} \\
 12 \text{ ft } 3 \text{ in}
 \end{array}$$

TRY:

$$\begin{array}{r}
 4 \text{ ft } 7 \text{ in} \\
 2 \text{ ft } 4 \text{ in} \\
 + 2 \text{ ft } 6 \text{ in} \\
 \hline
 \end{array}$$

Subtract:

$$\begin{array}{r}
 7 \text{ ft } 3 \text{ in} \text{ must borrow } 1 \text{ ft, and change the problem to:} \\
 - 3 \text{ ft } 7 \text{ in} \\
 \hline
 \end{array}
 \qquad
 \begin{array}{r}
 6 \text{ ft } 15 \text{ in} \\
 - 3 \text{ ft } 7 \text{ in} \\
 \hline
 3 \text{ ft } 8 \text{ in}
 \end{array}$$

TRY: $8 \text{ ft } 4 \text{ in}$
 $- 4 \text{ ft } 8 \text{ in}$

$3 \text{ gal } 2 \text{ qt}$
 $- 1 \text{ gal } 3 \text{ qt}$

Multiply:

$$\begin{array}{r}
 2 \text{ ft } 9 \text{ in} \\
 \times \quad 3 \\
 \hline
 6 \text{ ft } 27 \text{ in} \\
 27 \text{ in} = 2 \text{ ft } 3 \text{ in}
 \end{array}$$

TRY:

$$\begin{array}{r}
 3 \text{ ft } 8 \text{ in} \\
 \times \quad 5 \\
 \hline
 \end{array}$$

Answer: $8 \text{ ft } 3 \text{ in}$