

Skills Practice 8: Adding Imperial Measures

Adding Inches

Adding feet and inches can be confusing.

Example:

Add 6 in. + 7 in.

Solution:

$$\begin{aligned} 6 \text{ in.} + 7 \text{ in.} &= 13 \text{ in.} \\ &= 12 \text{ in.} + 1 \text{ in.} \\ &= 1 \text{ ft } 1 \text{ in.} \end{aligned}$$

There are
inches in one foot.

1. Fill in the blanks with the appropriate numbers.

a) $9 \text{ in.} + 5 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ in.} + \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

b) $10 \text{ in.} + 7 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ in.} + \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

c) $10 \text{ in.} + 11 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

d) $11 \text{ in.} + 8 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

e) $8 \text{ in.} + 5 \text{ in.} + 10 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

f) $11 \text{ in.} + 8 \text{ in.} + 5 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

g) $9 \text{ in.} + 10 \text{ in.} + 7 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

h) $11 \text{ in.} + 9 \text{ in.} + 12 \text{ in.} = \underline{\hspace{1cm}} \text{ in.}$
 $\hspace{1.5cm} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in.}$

There are
inches in 2 feet.
There are
inches in 3 feet.

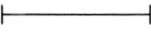
Adding Fractions (of an Inch)


- One way to add fractions is to draw them.

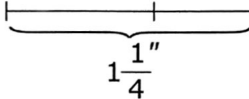
Example 1

What is $\frac{3}{4} + \frac{1}{2}$?

Solution

STEP 1: Draw a $\frac{3}{4}$ " line. 

STEP 2: Draw a $\frac{1}{2}$ " line starting at the end of the first line. 

STEP 3: Measure the total length of the line. 

2. Use a ruler to add the following fractions.

a) $1\frac{1}{2} + \frac{3}{4}$

b) $\frac{1}{4} + 2\frac{1}{2}$

c) $3\frac{3}{4} + 1\frac{1}{2}$


- You can also add fractions by relating them to something you already know, such as money.

Example 2

What is $\frac{3}{4} + \frac{1}{2}$?

Solution

STEP 1: Draw $\frac{3}{4}$ of a dollar using quarters. 

STEP 2: Draw $\frac{1}{2}$ of a dollar using quarters. 

STEP 3: Add. Five quarters is 4 quarters (\$1) plus one quarter, or $1\frac{1}{4}$.

3. Draw quarters to add the following fractions.

a) $1\frac{1}{4} + 2\frac{1}{2}$

b) $1\frac{1}{2} + \frac{3}{4}$

c) $3\frac{1}{2} + 2\frac{1}{4}$