

Lesson 2.3

Subtracting Rational Numbers (Decimals)

Essential Question

How can you use what you know about subtracting integers to subtract decimals?

Example 1:

a) $12.8 + 21.6$

Team
Negative

$$\begin{array}{r} 21.6 \\ - 12.8 \\ \hline 8.8 \end{array}$$

← > abs. value
on top

$$\boxed{-8.8}$$

b) $0.41 + 0.07$

$$\begin{array}{r} 0.41 \\ + 0.07 \\ \hline 0.48 \end{array}$$

1. $-13 + 5.9$

$$\begin{array}{r} 13.0 \\ + 5.9 \\ \hline 18.9 \end{array}$$

$$\boxed{-18.9}$$

2. $14.6 - (-9.2)$

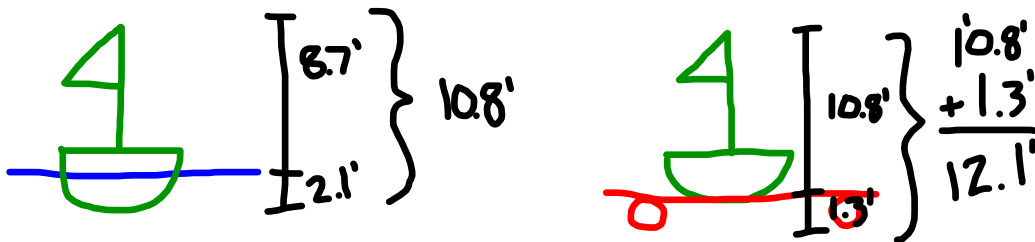
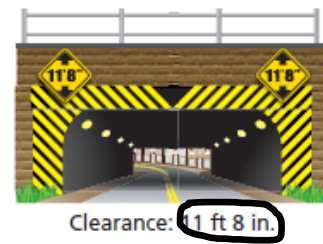
$$\begin{array}{r} 14.6 \\ + 9.2 \\ \hline 23.8 \end{array}$$

3. $-20.5 - (-20.5)$

$$0$$

Example 2:

In the water, the bottom of a boat is 2.1 feet below the surface, and the top of the boat is 8.7 feet above it. Towed on a trailer, the bottom of the boat is 1.3 feet above the ground. Can the boat and trailer pass under the bridge?



No, 12.1' won't fit under 11'8".

Example 3:

Find the distance between -7.5 and -15.3 on a ~~number line~~.

$$-7.5 - (-15.3) \quad \begin{array}{r} 15.3 \\ -7.5 \\ \hline 7.8 \end{array}$$

4. Find the distance between -2.5 and 8.3

$$-2.5 + 8.3 = 10.8 \rightarrow \boxed{10.8}$$

distance is
positive

$$\begin{array}{r} 2.5 \\ + 8.3 \\ \hline 10.8 \end{array}$$