

**Lesson Summary**

- Use the properties of operations to add and subtract rational numbers more efficiently. For instance,

$$-5\frac{2}{9} + 3.7 + 5\frac{2}{9} = \left(-5\frac{2}{9} + 5\frac{2}{9}\right) + 3.7 = 0 + 3.7 = 3.7.$$

- The opposite of a sum is the sum of its opposites as shown in the examples that follow:

$$-4\frac{4}{7} = -4 + \left(-\frac{4}{7}\right).$$

$$-(5 + 3) = -5 + (-3).$$

**Problem Set**

Show all steps taken to rewrite each of the following as a single rational number.

1.  $80 + \left(-22\frac{4}{15}\right)$

2.  $10 + \left(-3\frac{3}{8}\right)$

3.  $\frac{1}{5} + 20.3 - \left(-5\frac{3}{5}\right)$

4.  $\frac{11}{12} - (-10) - \frac{5}{6}$

5. Explain, step by step, how to arrive at a single rational number to represent the following expression. Show both a written explanation and the related math work for each step.

$$1 - \frac{3}{4} + \left(-12\frac{1}{4}\right)$$