

Exercise 31**Arithmetic Operations** Perform the indicated operations.

$$(a) \quad \frac{2}{3} \left(6 - \frac{3}{2} \right) \qquad (b) \quad \left(3 + \frac{1}{4} \right) \left(1 - \frac{4}{5} \right)$$

Solution**Part (a)**

$$\frac{2}{3} \left(6 - \frac{3}{2} \right)$$

In order to subtract the fractions in parentheses, make it so they have the same denominator.

$$\frac{2}{3} \left(6 \times \frac{2}{2} - \frac{3}{2} \right)$$

$$\frac{2}{3} \left(\frac{12}{2} - \frac{3}{2} \right)$$

$$\frac{2}{3} \left(\frac{12 - 3}{2} \right)$$

$$\frac{2}{3} \left(\frac{9}{2} \right)$$

$$3$$

Part (b)

$$\left(3 + \frac{1}{4} \right) \left(1 - \frac{4}{5} \right)$$

In order to add or subtract the fractions in parentheses, make it so they have the same denominator.

$$\left(3 \times \frac{4}{4} + \frac{1}{4} \right) \left(1 \times \frac{5}{5} - \frac{4}{5} \right)$$

$$\left(\frac{12}{4} + \frac{1}{4} \right) \left(\frac{5}{5} - \frac{4}{5} \right)$$

$$\left(\frac{12 + 1}{4} \right) \left(\frac{5 - 4}{5} \right)$$

$$\left(\frac{13}{4} \right) \left(\frac{1}{5} \right)$$

$$\frac{13}{20}$$