Exercise 29

Arithmetic Operations Perform the indicated operations.

$$\text{(a)} \quad \frac{3}{10} + \frac{4}{15} \qquad\qquad\qquad \text{(b)} \quad \frac{1}{4} + \frac{1}{5}$$

Solution

Part (a)

$$\frac{3}{10} + \frac{4}{15}$$

Each fraction can be multiplied by 1 without changing anything.

$$\frac{3}{10} \times \frac{3}{3} + \frac{4}{15} \times \frac{2}{2}$$

$$\frac{9}{30} + \frac{8}{30}$$

Now that the fractions have the same denominator, they can be added.

$$\frac{9+8}{30}$$

$$\frac{17}{30}$$

Part (b)

$$\frac{1}{4} + \frac{1}{5}$$

Each fraction can be multiplied by 1 without changing anything.

$$\frac{1}{4} \times \frac{5}{5} + \frac{1}{5} \times \frac{4}{4}$$

$$\frac{5}{20} + \frac{4}{20}$$

Now that the fractions have the same denominator, they can be added.

$$\frac{5+4}{20}$$

$$\frac{9}{20}$$