Name _____ Date ___ **Answer Key** ___

Do the Ratios Form a Proportion?

When two ratios are equivalent, they can form a proportion. To determine if two ratios are equivalent, write them as fractions with a common denominator.

Let's look at some examples! Determine if each pair of ratios forms a proportion.

1:2 and 2:4

$$\frac{1 \times 2}{2 \times 2} = \frac{2}{4}$$

The ratios **1:2** and **2:4** are equivalent, so the ratios form a proportion.

4:6 and 5:15

$$\frac{4 \div 2}{6 \div 2} = \frac{2}{3} \qquad \frac{5 \div 5}{15 \div 5} = \frac{1}{3}$$

$$\frac{2}{3} \neq \frac{1}{3}$$

The ratios **4:6** and **5:15** are *not* equivalent, so the ratios do not form a proportion.

Try it! Determine if each pair of ratios forms a proportion. In the box beneath each pair of ratios, place a ✔ if the ratios form a proportion or an **X** if they do not.

1. 1:7 and 2:14 ✔	**2.** 6:3 and 18:9 ✔	**3.** $\frac{8}{12}$ and $\frac{4}{6}$ ✔
4. $\frac{1}{9}$ and $\frac{4}{27}$ **X**	**5.** 25:10 and 5:2 ✔	**6.** $\frac{8}{20}$ and $\frac{3}{5}$ **X**
7. 6:3 and 8:4 ✔	**8.** $\frac{4}{5}$ and $\frac{5}{6}$ **X**	**9.** 8:3 and 12:5 **X**
10. 9:15 and 8:10 **X**	**11.** $\frac{2}{6}$ and $\frac{3}{9}$ ✔	**12.** 8:6 and 20:15 ✔