

# 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**

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

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

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.

<p><b>1.</b>      <b>1:7 and 2:14</b></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>2.</b>      <b>6:3 and 18:9</b></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>3.</b>      <math>\frac{8}{12}</math> and <math>\frac{4}{6}</math></p> <p style="text-align: right;"><input type="checkbox"/></p>
<p><b>4.</b>      <math>\frac{1}{9}</math> and <math>\frac{4}{27}</math></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>5.</b>      <b>25:10 and 5:2</b></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>6.</b>      <math>\frac{8}{20}</math> and <math>\frac{3}{5}</math></p> <p style="text-align: right;"><input type="checkbox"/></p>
<p><b>7.</b>      <b>6:3 and 8:4</b></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>8.</b>      <math>\frac{4}{5}</math> and <math>\frac{5}{6}</math></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>9.</b>      <b>8:3 and 12:5</b></p> <p style="text-align: right;"><input type="checkbox"/></p>
<p><b>10.</b>     <b>9:15 and 8:10</b></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>11.</b>     <math>\frac{2}{6}</math> and <math>\frac{3}{9}</math></p> <p style="text-align: right;"><input type="checkbox"/></p>	<p><b>12.</b>     <b>8:6 and 20:15</b></p> <p style="text-align: right;"><input type="checkbox"/></p>