1. The two triangles are similar. What is the length of x?

2. The two triangles are similar. What is the length of side DF?

3. The two triangles are similar. The side lengths of Triangle A are 5 times the length of Triangle B. How many triangle B's will fit into Triangle A?

4. Which of the following rectangles is similar to a 5 inch by 10 inch rectangle?

5. If triangle ABC is similar to triangle DEF, what is the measure of angle D?

6. The table shows the cost of dinner for different numbers of people. The equation is:

<table>
<thead>
<tr>
<th>People (p)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dinner Cost (c)</td>
<td>4.00</td>
<td>8.00</td>
<td>12.00</td>
<td>16.00</td>
</tr>
</tbody>
</table>

The equation is:

\[ P = 4c \]

True

False
7  People (p)  1  2  3  4  
Dinner Cost (c)  4.00  8.00  12.00  16.00

What is the cost if 50 people ate dinner?

8 If point D is tripled, what would be the coordinates of the new point?

A (6, 3)  
B (12, 6)  
C (18, 9)  
D (18, 6)

9 Using the equation: \( d = 30t \), if \( t = 3.5 \), what is \( d \)?

10 Using the equation: \( d = 30t \), if \( d = 75 \), what is \( t \)?

11 If \( a = 2 \), \( b = 5 \), and \( c = 3 \), solve the following equation: \( ac + b^2 \)

12 A 10 ft adult has a shadow 5 ft long. How long is the shadow of a 4 ft child standing next to the adult?
13. The ladders shown below are standing against the wall at the same angle. How high up the wall does the longer ladder go?

14. Are the following ratios equal to 6 to 8?
   True
   False

15. Tommy wanted to find the height of the flagpole at his school. He used a mirror and recorded some measurements. What is the height of the flagpole?

16. At Edison, 1 out of every 5 sixth graders went to a movie theater over the weekend. If there are 250 students in the sixth grade, how many of them saw the movie?

17. To make pancake batter you need 4 cups of water for every 5 cups of flour. You plan to use 15 cups of flour. How many cups of water would you need?

18. The Champaign Public Library was having a book sale. Mikhail bought 28 books for $16.00 and Michael bought 30 books. If the rate is the same, what is his total?
A homeroom class of 30 sixth graders were asked to list any sports he or she liked to play. The results for four of the most popular sports are seen in the table below. The students could choose more than one sport.

<table>
<thead>
<tr>
<th>Sports</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Cross-Country</td>
<td>20</td>
<td>9</td>
</tr>
<tr>
<td>Football</td>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>Total Surveyed</td>
<td>14</td>
<td>16</td>
</tr>
</tbody>
</table>

What fraction of the class is male?

The students in Edison's Band sold Beef House Rolls to raise money for a trip. The students raised $520 from 65 orders of Beef House Rolls. How much money did they charge for each order of Beef House Rolls?

Annie made 75 out of 80 free throws. What percent did she make?

If 5 candy bars cost $8.00, what is the cost of 10 candy bars?
If you ate 3 pieces out of an 8 piece pizza, what percent of the pizza did you eat?

\[ \frac{3}{10} = \frac{x}{30} \]