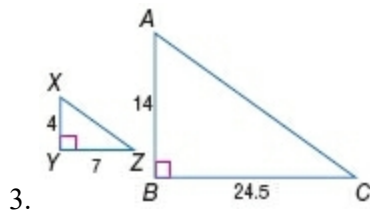


## Chapter 7 Practice Test

Determine whether each pair of figures is similar. If so, write the similarity statement and scale factor. If not, explain your reasoning.



**SOLUTION:**

$\triangle ABC \sim \triangle XYZ$  because the corresponding relationships of

$$\angle Y \cong \angle B$$

$$\frac{XY}{AB} = \frac{4}{14} = \frac{2}{7}$$

$$\frac{YZ}{BC} = \frac{7}{24.5} = \frac{14}{49} = \frac{2}{7}$$

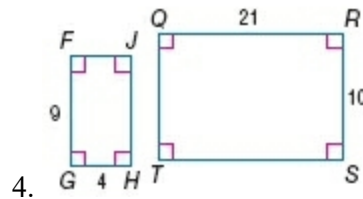
Thus, the conditions for  $SAS \sim$  Theorem are met.

Therefore, the triangles are similar,  $\frac{XY}{AB} = \frac{YZ}{BC}$ , and the scale factor is  $\frac{2}{7}$ .

**ANSWER:**

yes; Triangle  $ABC$  is similar to triangle  $XYZ$  because

$$\angle Y \cong \angle B \text{ and } \frac{XY}{AB} = \frac{YZ}{BC}, \frac{2}{7}.$$



**SOLUTION:**

Step 1: Compare corresponding angles:

Since all of the angles in the polygons are right angles, they are all congruent to each other. Therefore, corresponding angles are congruent.

Step 2: Compare corresponding sides:

$$\frac{FG}{QR} = \frac{9}{21} = \frac{3}{7}$$

$$\frac{GH}{RS} = \frac{4}{10} = \frac{2}{5}$$

Since  $\frac{FG}{QR} \neq \frac{GH}{RS}$ , the figures are not similar.

**ANSWER:**

no;  $\frac{FG}{QR} \neq \frac{GH}{RS}$

## Chapter 7 Practice Test

5. **CURRENCY** Jane is traveling to Europe this summer with the French Club. She plans to bring \$300 to spend while she is there. If \$90 in U.S. currency is equivalent to 63 euros, how many euros will she receive when she exchanges her money?

**SOLUTION:**

Let the unknown number of euros be  $x$ .

Form a proportion for the given information.

$$\frac{63 \text{ Euros}}{90 \text{ USDollars}} = \frac{x \text{ Euros}}{300 \text{ US Dollars}}$$
$$\frac{63}{90} = \frac{x}{300}$$

Cross multiply.

$$63(300) = x(90)$$

Solve for  $x$ .

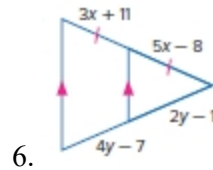
$$18900 = 90x$$

$$x = 210$$

**ANSWER:**

210

**ALGEBRA** Find  $x$  and  $y$ . Round to the nearest tenth if necessary.



**SOLUTION:**

It is given that  $3x + 11 = 5x - 8$  and since the lines are parallel, we also know that  $4y - 7 = 2y - 1$ .

Solve for  $x$ .

$$3x + 11 = 5x - 8$$

$$-2x = -19$$

$$x = 9.5$$

Solve for  $y$ .

$$4y - 7 = 2y - 1$$

$$2y = 6$$

$$y = 3$$

**ANSWER:**

$$x = 9.5, y = 3$$