

G3 C Level Test Review

The polygons in each pair are similar. Find the missing side length.

1)

$$\frac{12}{x} = \frac{18}{6}$$

Cross multiply

$$18x = 12 \cdot 6$$

$$18x = 72$$

$$\frac{18x}{18} = \frac{72}{18}$$

$$x = 4$$

2)

$$\frac{4}{24} = \frac{x}{42}$$

$$24x = 4 \cdot 42$$

$$24x = 168$$

$$\frac{24x}{24} = \frac{168}{24}$$

$$x = 7$$

3)

$$\frac{7}{28} = \frac{x}{32}$$

$$28x = 7 \cdot 32$$

$$28x = 224$$

$$\frac{28x}{28} = \frac{224}{28}$$

$$x = 8$$

4)

$$\frac{21}{35} = \frac{x}{20}$$

$$35x = 420$$

$$\frac{35x}{35} = \frac{420}{35}$$

$$x = 12$$

Solve for x. The polygons in each pair are similar.

5)

$$\frac{2x}{24} = \frac{6}{9}$$

$$2x \cdot 9 = 24 \cdot 6$$

$$18x = 144$$

$$\frac{18x}{18} = \frac{144}{18}$$

$$x = 8$$

6)

$$\frac{6}{x} = \frac{12}{18}$$

$$12x = 108$$

$$\frac{12x}{12} = \frac{108}{12}$$

$$x = 9$$

Solve for x and y. The polygons in each pair are similar.

7)

$$\frac{x}{7} = \frac{10}{5}$$

$$5x = 70$$

$$\frac{5x}{5} = \frac{70}{5}$$

$$x = 14$$
  

$$\frac{y}{8} = \frac{12}{6}$$

$$6y = 96$$

$$\frac{6y}{6} = \frac{96}{6}$$

$$y = 16$$

8)

$$\frac{x}{24} = \frac{3}{12}$$

$$12x = 72$$

$$\frac{12x}{12} = \frac{72}{12}$$

$$x = 6$$
  

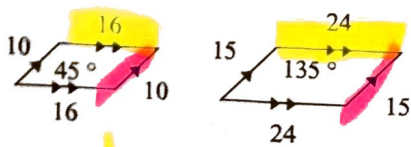
$$\frac{y}{32} = \frac{3}{12}$$

$$12y = 96$$

$$y = 8$$

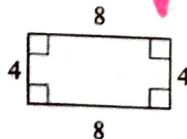
State if the polygons are similar.

9)

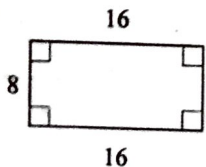


$\frac{24}{16} = 1.5$  Similar  
 $\frac{15}{10} = 1.5$

11)



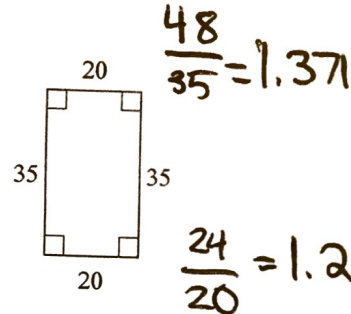
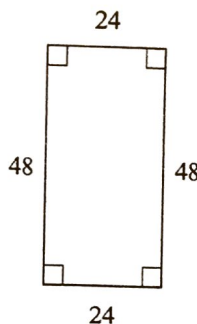
$\frac{16}{8} = 2$



$\frac{8}{4} = 2$

Similar

10)

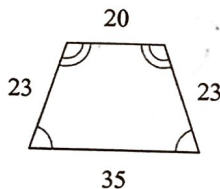


$\frac{48}{35} = 1.371$

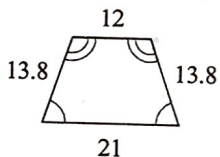
$\frac{24}{20} = 1.2$

Not similar

12)



$\frac{20}{12} = 1.\bar{6}$

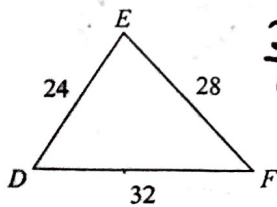


$\frac{23}{13.8} = 1.\bar{6}$  Similar

$\frac{35}{21} = 1.\bar{6}$

State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

13)



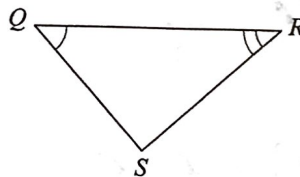
$\frac{24}{6} = 4$

$\frac{28}{7} = 4$

$\frac{32}{8} = 4$

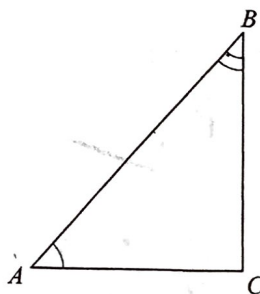
$\triangle DEF \sim \triangle DKL$

14)



$\angle Q \cong \angle A$

$\angle R \cong \angle B$



$\triangle ABC \sim \triangle QRS$

★ Flow charts are not required for C-Level