

Questions

**Example 1:**

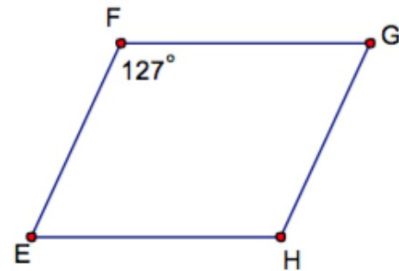
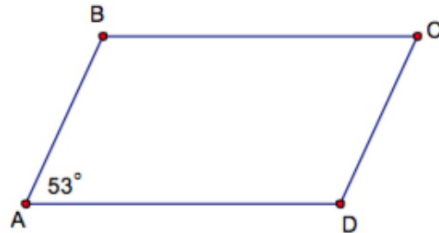
$ABCD \sim EFGH$ . Complete each statement.

a.  $m\angle E = m\angle A = 53^\circ$

b.  $m\angle B = m\angle F = 127^\circ$

c.  $\frac{AB}{EF} = \frac{AD}{EH}$

d.  $\frac{GH}{CD} = \frac{FG}{BC}$

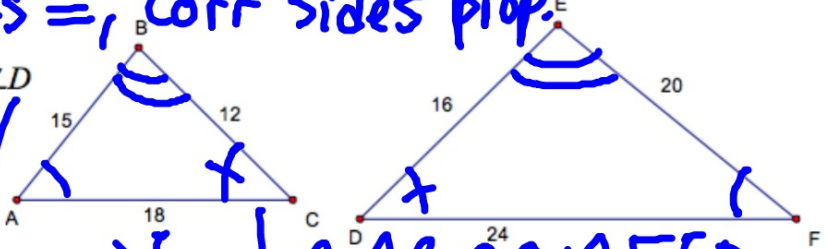


**Example 2:**

Determine whether the triangles are similar. If they are, write a similarity statement and the similarity ratio. *corr  $\angle$ s  $\cong$ , corr sides prop.*

$\angle A \cong \angle F, \angle B \cong \angle E, \angle C \cong \angle D$

$\frac{15}{20} = \frac{12}{16} = \frac{18}{24} \checkmark$



*Yes!  $\triangle ABC \sim \triangle FED$*

Questions

**Example 3:**

Sketch  $\triangle XYZ$  and  $\triangle MNP$  with  $\angle X \cong \angle M$ ,  $\angle Y \cong \angle N$ ,  $\angle Z \cong \angle P$ . Also,  $XY = 12$ ,  $YZ = 14$ ,  $ZX = 16$ ,  $MN = 18$ ,  $NP = 21$ , and  $PM = 24$ . Can you conclude that the two triangles are similar? Explain.

Yes

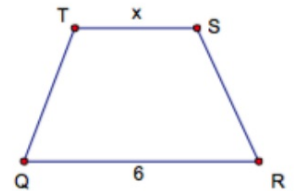
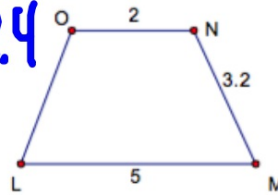
$$\triangle XYZ \sim \triangle MNP$$

**Example 4:**

a.  $LMNO \sim QRST$ . Find the value of  $x$ .

$x=2.4$

$$\frac{2}{x} = \frac{5}{6}$$



b. Find  $SR$ .

3.84

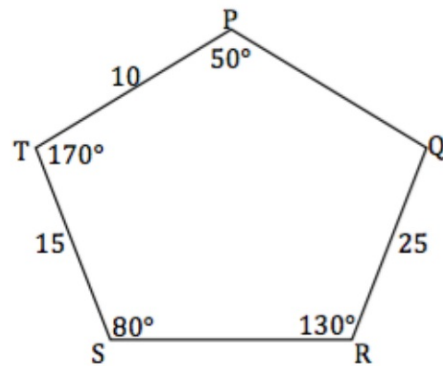
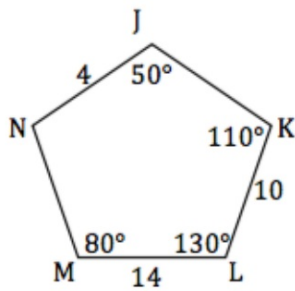
$$\frac{2}{2.4} = \frac{3.2}{SR}$$

$$\frac{5}{6} = \frac{3.2}{SR}$$

Questions

**Example 5:**

Pentagon JKLMN ~ Pentagon PQRST. Find each measure.



a.  $m\angle N = 170^\circ$

b.  $m\angle Q = 110^\circ$

c.  $NM = 6$   
 $\frac{10}{25} = \frac{NM}{15}$

d.  $SR = 35$   
 $\frac{10}{25} = \frac{14}{SR}$

Summary: