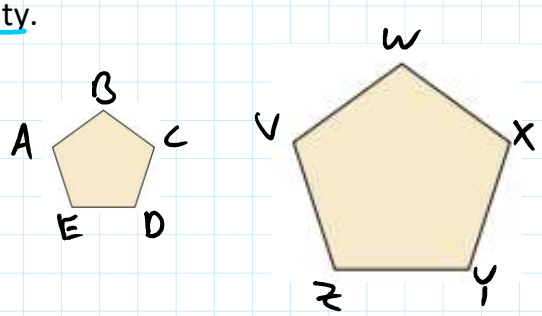
Sec. 8.1-8.2 Quiz Review

List all pairs of congruent angles. Then write the ratios of the corresponding side lengths in a statement of proportionality.

$ABCDE \sim VWXYZ$



$\angle A \cong \angle V$
$\angle B \cong \angle W$
$\angle C \cong \angle X$
$\angle D \cong \angle Y$
$\angle E \cong \angle Z$

$\frac{AB}{VW} = \frac{BC}{WX} = \frac{CD}{XY} = \frac{DE}{YZ} = \frac{AE}{VZ}$

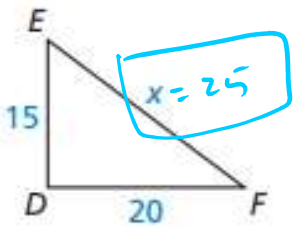
$\frac{\overline{AB}}{\overline{VW}} = \frac{\overline{BD}}{WX} = \frac{CD}{\quad}$ . . . .

2

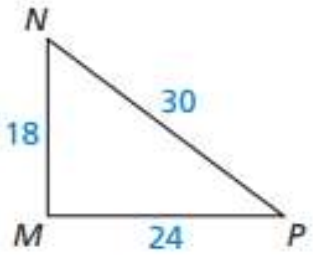
The POLYGONS ARE SIMILAR. Write a proportion and find the value of x.

$\triangle DEF \sim \triangle MNP$

$\frac{DE}{\quad} = \frac{EF}{\quad} = \frac{DF}{\quad}$



x = 25



$\frac{DE}{MN} = \frac{EF}{NP} = \frac{DF}{MP}$

$\frac{15}{18} = \frac{X25}{30}$

$\frac{5}{6} = \frac{X}{30}$

$6x = 5 \cdot 30$

$\frac{6x}{6} = \frac{150}{6}$

$x = 25$

$\frac{5}{6}$

$\frac{X}{30} = \frac{20}{24}$

$24x = 30 \cdot 20$

$\frac{24x}{24} = \frac{600}{24}$

$x = 25$

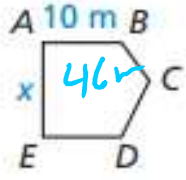
$\frac{20}{24} = \frac{10}{12} = \frac{5}{6}$

$\frac{5}{6}$

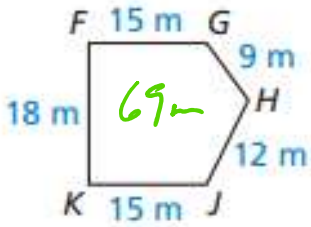
2

In the diagram, the two gazebos are similar. Find the perimeter of each given that $ABCDE \sim FGHJK$

Gazebo A



Gazebo B



$\frac{AB}{FG} = \frac{BC}{GH} = \frac{CD}{HJ} = \frac{DE}{JK} = \frac{AE}{FK} = \frac{Pof A}{Pof B}$

$\frac{10}{15} = \frac{P}{69}$

$69\left(\frac{10}{15}\right) = \left(\frac{P}{69}\right)69$

$46 = P$

$Pof B = 15 + 9 + 12 + 15 + 18$

69

$\frac{2}{3} = \frac{P}{69}$

$2 \cdot 69 = 3P$

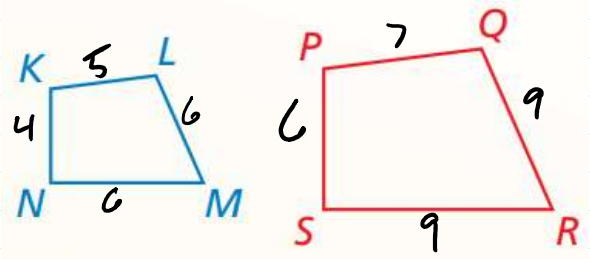
$\frac{138}{3} = \frac{3P}{3}$

$46 = P$

2

Determine whether the polygons are similar. If they are, write a similarity statement.

$\frac{KL}{} = \frac{LM}{} = \frac{MN}{} = \frac{NK}{}$



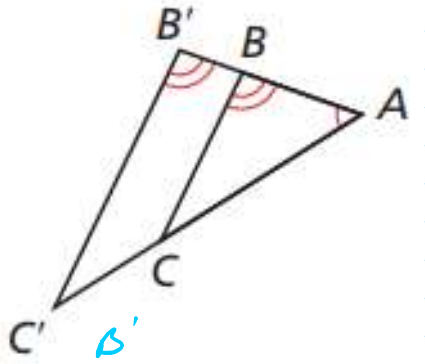
$\frac{KL}{PQ} = \frac{LM}{QR} = \frac{MN}{RS} = \frac{NK}{SP}$

$\frac{5}{7} = \frac{6}{9} = \frac{6}{9} = \frac{4}{6}$

$\frac{5}{7} \neq \frac{2}{3} = \frac{2}{3} = \frac{2}{3}$

Not ~

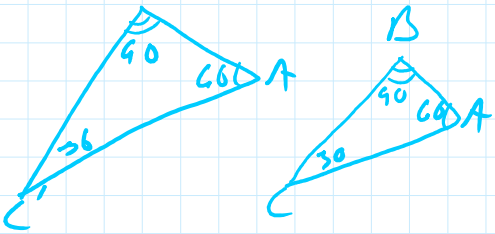
Show that the two triangles are similar.
Explain your reasoning.
$\triangle ABC \sim \triangle AB'C'$



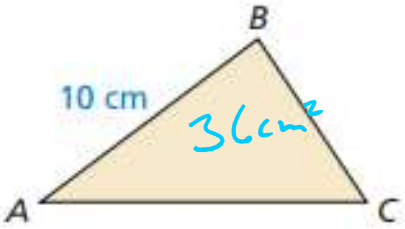
$\angle B \cong \angle B'$

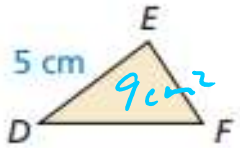
$\angle A \cong \angle A$

$\therefore$ AA similarity



In the diagram, $\triangle ABC \sim \triangle DEF$. Find the area of $\triangle DEF$.





Area of $\triangle ABC = 36$ cm²

$\left(\frac{AB}{DE}\right)^2 : \left(\frac{BC}{EF}\right)^2 : \left(\frac{AC}{DF}\right)^2 = \frac{A\triangle ABC}{A\triangle DEF}$

$\left(\frac{10}{5}\right)^2 : \frac{100}{25} = \frac{4}{1}$

$\left(\frac{2}{1}\right)^2 = \frac{36}{x}$

$\frac{4}{1} = \frac{36}{x}$

$4x = 1 \cdot 36$

$\frac{4x}{4} = \frac{36}{4}$

$x = 9$

2

Note card allowed
Calculator allowed
12 Questions
GOOD LUCK!