

Similar Polygons

1. Name the corresponding angles and sides on the following figures:

a) $\triangle ABC$ and $\triangle DEF$

$$\angle A = \angle \underline{\hspace{2cm}}$$

$$\angle B = \angle \underline{\hspace{2cm}}$$

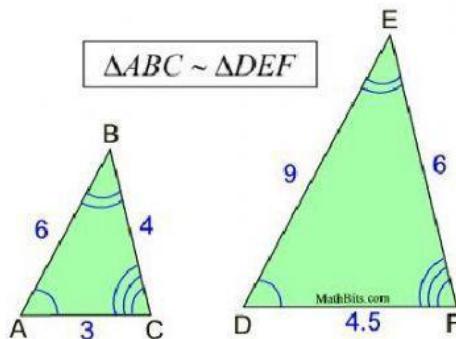
$$\angle C = \angle \underline{\hspace{2cm}}$$

$$\overline{AB} = \underline{\hspace{2cm}}$$

$$\overline{BC} = \underline{\hspace{2cm}}$$

$$\overline{CA} = \underline{\hspace{2cm}}$$

$$\triangle ABC \sim \triangle DEF$$



b) polygon JKLM and polygon QNOP

$$\angle J = \angle \underline{\hspace{2cm}}$$

$$\angle K = \angle \underline{\hspace{2cm}}$$

$$\angle L = \angle \underline{\hspace{2cm}}$$

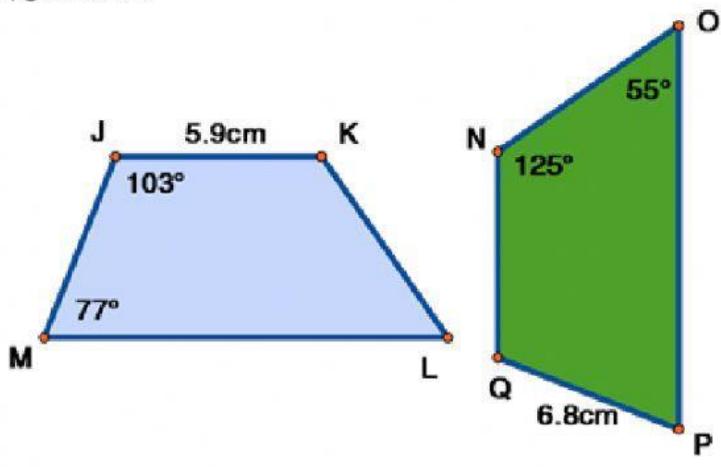
$$\angle M = \angle \underline{\hspace{2cm}}$$

$$\overline{JK} = \underline{\hspace{2cm}}$$

$$\overline{KL} = \underline{\hspace{2cm}}$$

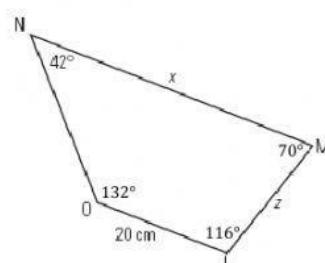
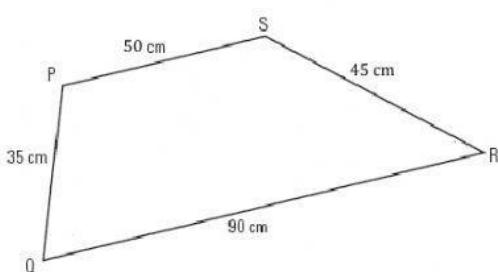
$$\overline{LM} = \underline{\hspace{2cm}}$$

$$\overline{MJ} = \underline{\hspace{2cm}}$$



2. If trapezoid PQRS is similar to trapezoid LMNO:

a) What are the values of $\angle P$, $\angle S$, $\angle R$, and $\angle Q$?



$$\angle P = \underline{\hspace{2cm}}^\circ$$

$$\angle S = \underline{\hspace{2cm}}^\circ$$

$$\angle R = \underline{\hspace{2cm}}^\circ$$

$$\angle Q = \underline{\hspace{2cm}}^\circ$$

b) What are the values of \overline{LM} , \overline{MN} , \overline{NO} , and \overline{OL} ?

Scale Factor: $\underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

fraction number/decimal

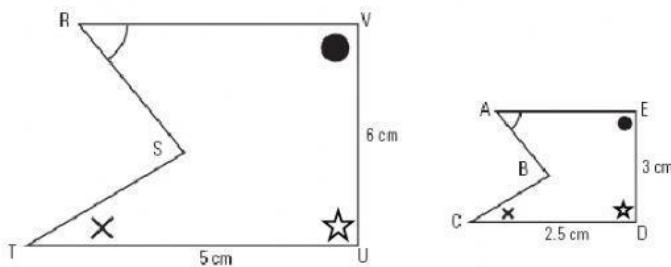
$$\overline{LM} = \underline{\hspace{2cm}} \text{ cm}$$

$$\overline{MN} = \underline{\hspace{2cm}} \text{ cm}$$

$$\overline{NO} = \underline{\hspace{2cm}} \text{ cm}$$

$$\overline{OL} = \underline{\hspace{2cm}} \text{ cm}$$

3. Are the two pentagons shown below similar? (Angles marked with the same symbol are equal.)



a) corresponding angles $\angle R$ and \angle _____

corresponding angles $\angle V$ and \angle _____

corresponding angles $\angle U$ and \angle _____

corresponding angles $\angle T$ and \angle _____

b) the scale factor for \overline{VU} and its corresponding side is:

$$\text{---} = \text{---}$$

fraction number/decimal

the scale factor for \overline{UT} and its corresponding side is:

$$\text{---} = \text{---}$$

fraction number/decimal

_____, they _____ similar because all corresponding angles are _____ and the scale factors are _____.

4. Frank enlarges a photo to poster size. The original photo is 5" by 7". If Frank enlarges it to 1 m by 1.5 m, will it be similar to the original?



The scale factor to enlarge from 5" to 1 m is:

$$\text{---} = \text{---}$$

fraction number/decimal (round to one decimal place)

The scale factor to enlarge from 7" to 1.5 m is:

$$\text{---} = \text{---}$$

fraction number/decimal (round to one decimal place)

_____, the poster _____ similar to the original because the scale factors are _____.