

Similar Polygons

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

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

$\angle A = \angle$ _____

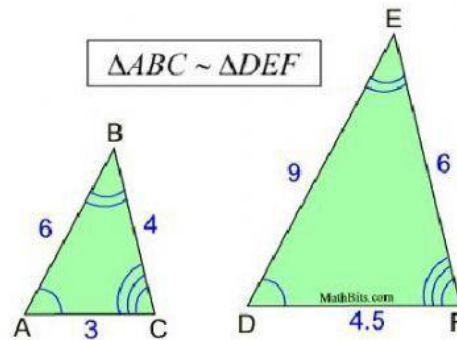
$\angle B = \angle$ _____

$\angle C = \angle$ _____

$\overline{AB} =$ _____

$\overline{BC} =$ _____

$\overline{CA} =$ _____



b) polygon JKLM and polygon QNOP

$\angle J = \angle$ _____

$\angle K = \angle$ _____

$\angle L = \angle$ _____

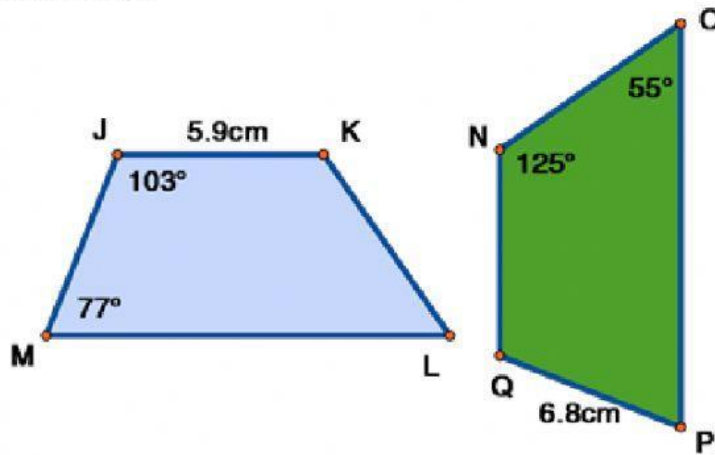
$\angle M = \angle$ _____

$\overline{JK} =$ _____

$\overline{KL} =$ _____

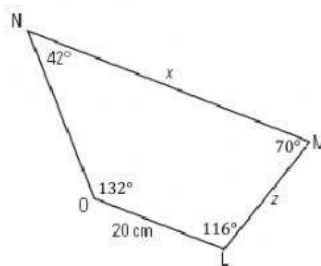
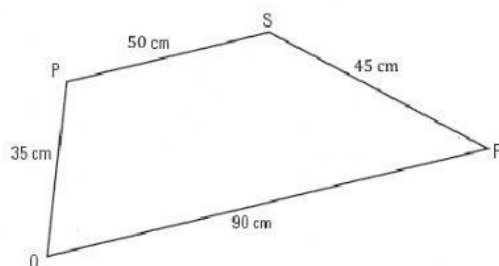
$\overline{LM} =$ _____

$\overline{MJ} =$ _____



2. If trapezoid PQRS is similar to trapezoid LMNO:

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



$\angle P =$ _____ $^\circ$

$\angle S =$ _____ $^\circ$

$\angle R =$ _____ $^\circ$

$\angle Q =$ _____ $^\circ$

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

Scale Factor: _____ = _____
fraction number/decimal

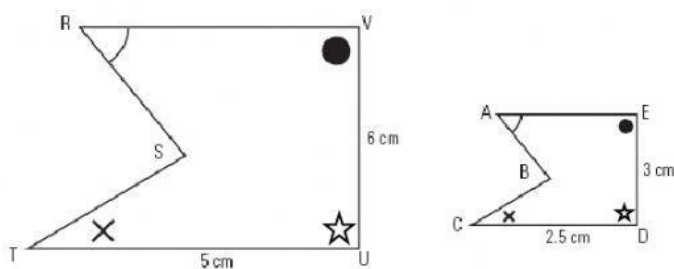
$\overline{LM} =$ _____ cm

$\overline{MN} =$ _____ cm

$\overline{NO} =$ _____ cm

$\overline{OL} =$ _____ 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:

_____ = _____
 fraction number/decimal

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

_____ = _____
 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:

_____ = _____
 fraction number/decimal (round to one decimal place)

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

_____ = _____
 fraction number/decimal (round to one decimal place)

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