Secondary 2
lesson 10.2

Similar Polygons

Objectives:

- Understand Similar shapes
  - Naming is important
- Use proportions to find missing side lengths.

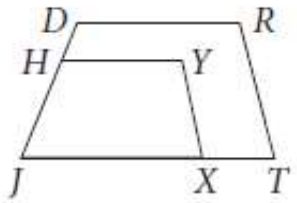
Similar Polygons

Polygons that have the same shape but may be a different size are called SIMILAR. The symbol for similar is ~.

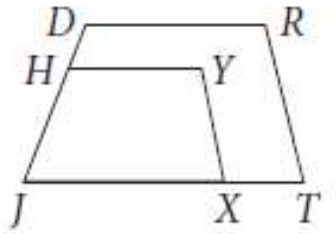
To have the same shape means all the angles have to be the same size. The sides do not have to be the same size but they do have to have the same proportions.

Naming is very important when working with similar shapes. Letters that name matching points HAVE to be in the same place in the name.

$For\ example$
$JDRT \sim JHYX.$

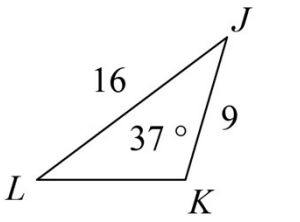


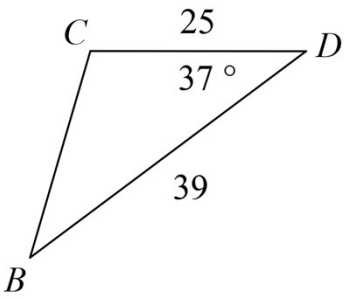
On the previous example:
With polygons $JDRT \sim JHYX$ we know angle D is the same as angle H because they are in the same location in the name. We also know that HY/DR = YX/RT. We can make statements like this about all the sides and angles.

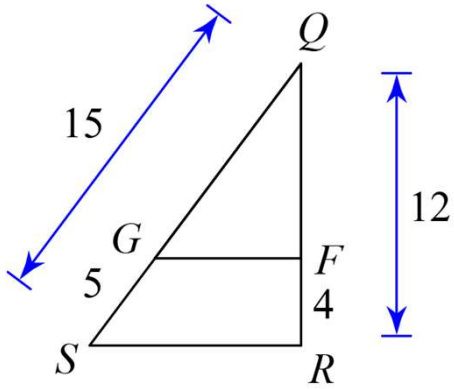


A statement like JDRT~JHYX that says two polygons are similar is called a ***Similarity Statement.***

Write a *Similarity Statement for the following*:



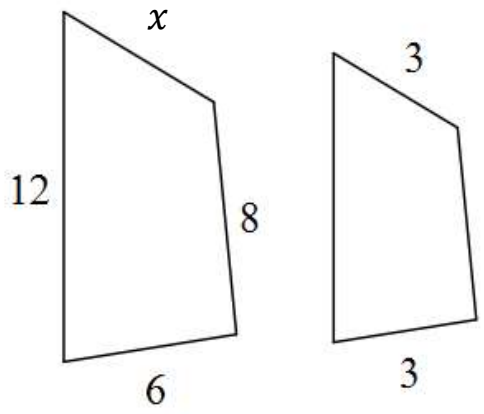


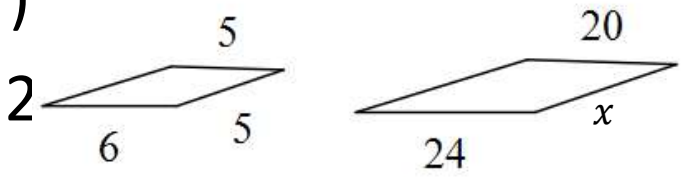


Similar Polygons

Set up a proportion and find the missing side.

- State k (the ratio or scale factor)

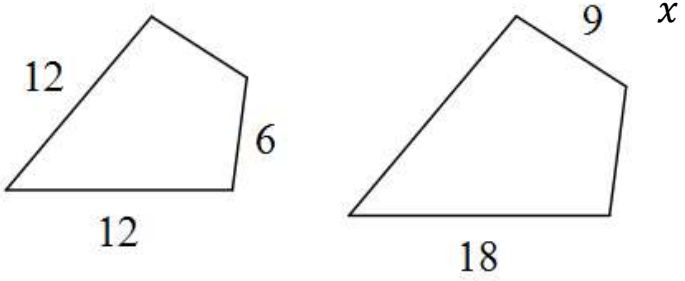


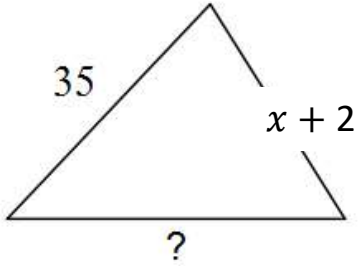


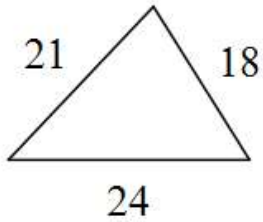
Trick question…..

Similar Polygons

Set up a proportion and find the missing side. State k.







Review – solve:

$2x^2 - 100 = 0$

$x^2 + x - 5 = 0$

$(x + 6)(2x - 3) = 0$

<u>Assignment:</u>

Worksheet 10.2

XL10.2