7.2

Name (print first and last) _____ **Per_____ Date:** _3/4 due 3/5_

7.2 Similarity: Relationships of side lengths   **Geometry Regents 2013-2014 Ms. Lomac**

SLO: I can identify corresponding sides and use them to write ratios and proportions.

VOCABULARY (use these words while you are answering questions)

Dilation (Notation D$_k$)	Segment	Length	Similar	Image
Coordinates	Direction	Congruent	Units	Original
Scale factor	Center of dilation	Origin	Proportional	

TO DO:

The lengths for problem #3 on the skill/task 7.1 similarity sheet are copied below in simplified radical form.

	AB	BC	CD	DE	EA
Original	1	$\sqrt{34}=\sqrt{34}$	6	2	$\sqrt{13}=\sqrt{13}$
'	2	$\sqrt{136}=2\sqrt{34}$	12	4	$\sqrt{52}=2\sqrt{13}$
''	3	$\sqrt{306}=3\sqrt{34}$	18	6	$\sqrt{117}=3\sqrt{13}$
'''	4	$\sqrt{544}=4\sqrt{34}$	24	8	$\sqrt{208}=4\sqrt{13}$
''''	5	$\sqrt{850}=5\sqrt{34}$	30	10	$\sqrt{325}=5\sqrt{13}$
'''''	6	$\sqrt{1224}=6\sqrt{34}$	36	12	$\sqrt{468}=6\sqrt{13}$

☐ (1) Use the lengths from the table above to complete the table of ratios. (Use "alpha➤f1➤4" to enter fractions on the calculator)

	$\dfrac{A'''B'''}{AB}$	$\dfrac{B'''C'''}{BC}$	$\dfrac{C'''D'''}{CD}$	$\dfrac{D'''E'''}{DE}$	$\dfrac{E'''A'''}{EA}$
Ratio of side lengths					
Ratio as a decimal (to the nearest hundredth)					

☐ (2) What do you notice about the ratios as decimals? How does the ratio as a decimal connect to the graph? (Look at it)

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☐ (3) Use the lengths from the table above to complete the table of ratios.

	$\dfrac{A''B''}{A''''B''''}$	$\dfrac{B''C''}{B''''C''''}$	$\dfrac{C''D''}{C''''D''''}$	$\dfrac{D''E''}{D''''E''''}$	$\dfrac{E''A''}{E''''A''''}$
Ratio of side lengths					
Ratio as a decimal (to the nearest hundredth)					

☐ (4) What do you notice about the ratios as decimals? How does the ratio as a decimal connect to the graph? (Look at it)
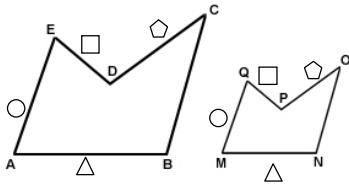
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☐ (5) Write a general statement about the ratios of corresponding sides of similar shapes.

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7.2

(6) For each pair of similar figures complete each proportion with a ratio that is equivalent. You may use how the drawing looks to determine corresponding sides. (longest to longest, shortest to shortest, etc.)
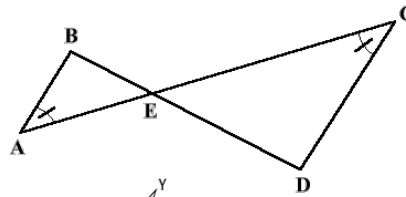
a pair of corresponding sides

a pair of corresponding angles

$$\frac{AB}{XY} = \frac{CB}{}$$

$$\frac{AB}{PQ} = \frac{}{ST}$$
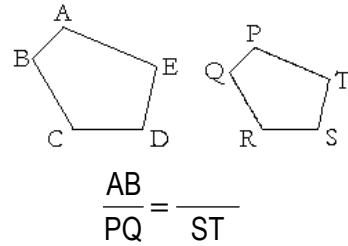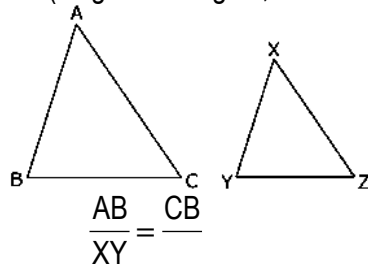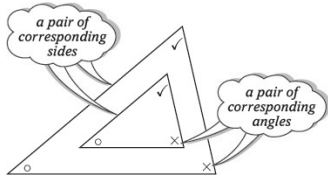
(7) For each pair of similar figures, write 2 correct proportions. You may use how the drawing looks to determine corresponding sides. You may also highlight or use shapes like the example to show corresponding sides.
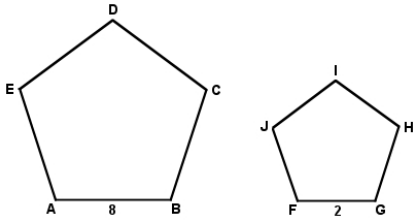
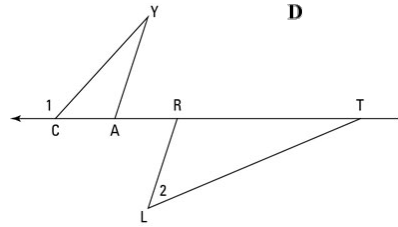$$\frac{ED}{QP} = \frac{DC}{PO}$$
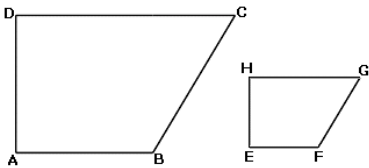
$$\frac{AB}{MN} = \frac{EA}{QM}$$

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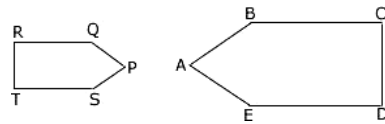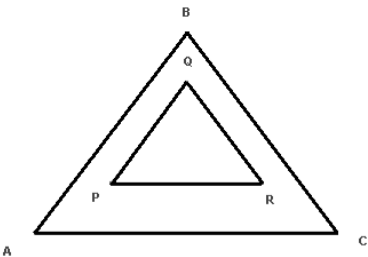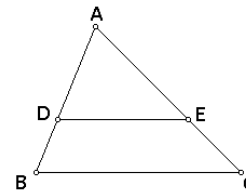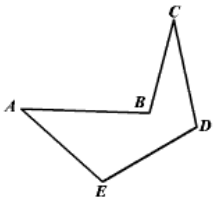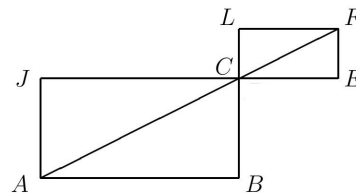
(8) Summarize what we know about similar figures (use the terms corresponding, angles, sides, ratio, proportion, congruent):

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