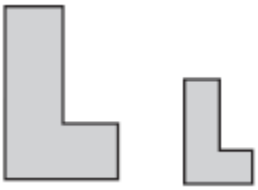
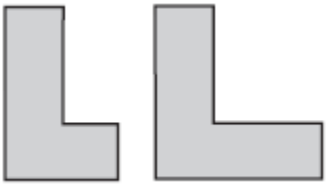
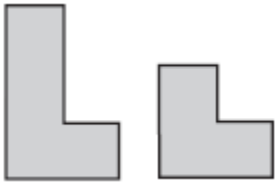
Pre-High School SOL Chapter 8 **Name: _____**

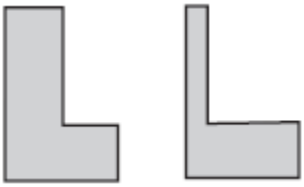
Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following appears to be a pair of similar shapes?

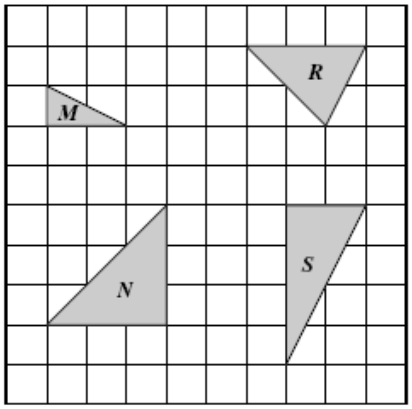
a. 

c. 

b. 

d. 

____ 2. Four triangles are shown on the grid below.



Which two triangles appear to be similar?

a. *M* and *S* b. *M* and *N* c. *N* and *S* d. *R* and *N*

____ 3. The following is true about similar triangles ABC and DEF.

$$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF} = \frac{2}{1}$$

Which could be the lengths of BC and EF?

a. BC=6 and EF=3
b. BC=9 and EF=3
c. BC=3 and EF=6
d. BC=3 and EF=9

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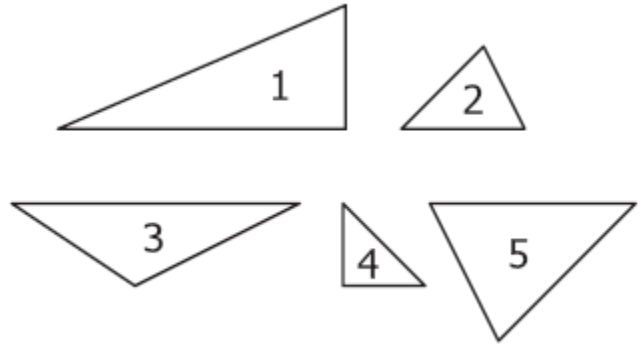
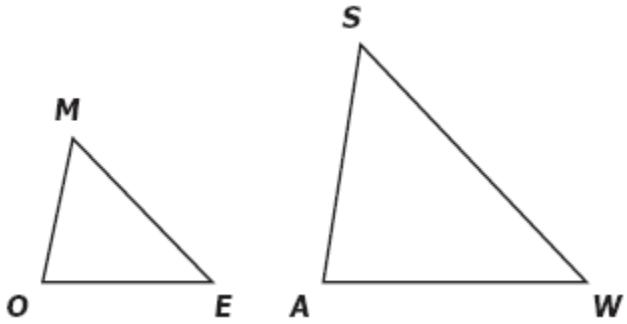
____ 4. Which pair of triangles is most likely similar?



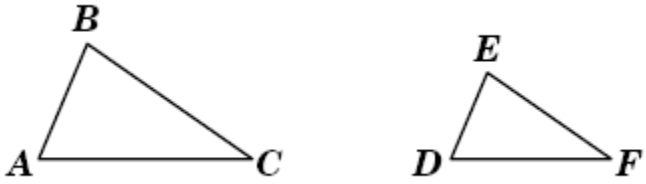
a. 1 and 4 b. 2 and 5 c. 3 and 5 d. 4 and 2

____ 5. Triangle MOE is similar to triangle SAW. Which must be true?



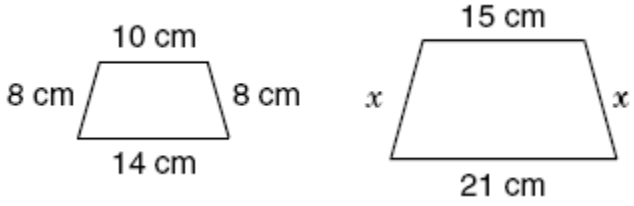
a. $\angle MEO \cong \angle ASW$
b. $\frac{MO}{SA} = \frac{OE}{SW}$
c. $\angle MEO \cong \angle SWA$
d. $\frac{MO}{SA} = \frac{ME}{AW}$

____ 6. If ΔABC is similar to ΔDEF, which of the following must be true?



a. $\frac{AB}{AC} = \frac{DE}{EF}$ b. $\frac{AB}{DF} = \frac{AC}{EF}$ c. $\frac{AB}{BC} = \frac{DE}{DF}$ d. $\frac{AB}{DE} = \frac{AC}{DF}$

____ 7. What must the value of x be in order for the figures below to be similar?



a. 16 cm b. 14 cm c. 12 cm d. 10 cm

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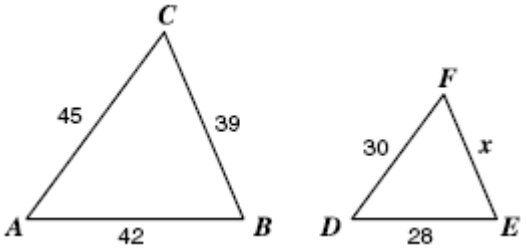
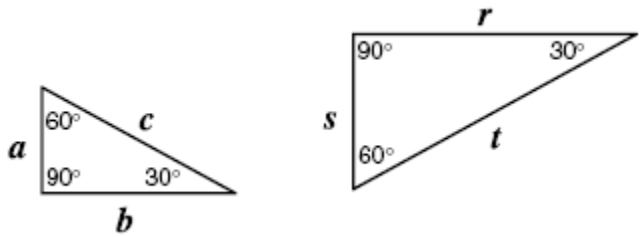
____ 8. What value of x would make ΔABC similar to ΔDEF?



a. 26 b. 29 c. 31 d. 32

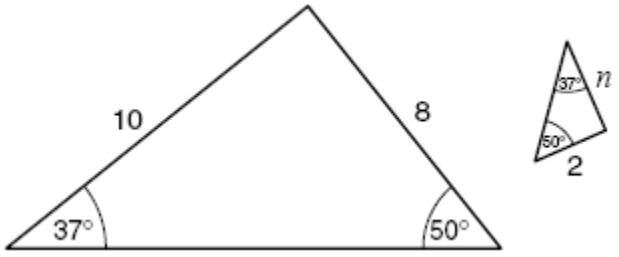
____ 9. This is a pair of similar triangles.



Which of the following proportions is true for these triangles?

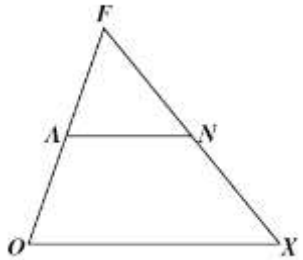
a. $\frac{a}{s} = \frac{c}{t}$ b. $\frac{a}{s} = \frac{b}{t}$ c. $\frac{a}{s} = \frac{c}{r}$ d. $\frac{a}{s} = \frac{s}{b}$

____ 10. What is the length of side n on the second triangle?



a. 2 b. 2.5 c. 4 d. 5

____ 11. Triangle *FOX* is similar to triangle *FAN*.



Which side of triangle *FOX* corresponds to side $\overline{FA}$?

a. $\overline{FO}$ b. $\overline{AO}$ c. $\overline{FN}$ d. $\overline{NX}$

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1. A _____ is a comparison of two quantities

2. A _____ is an equation stating that two ratios are equal

3. The _____ _____ is the ratio of corresponding sides of similar polygons.

4. Two polygons are similar if and only if their corresponding angles are _____ and the measures of their corresponding sides are _____.

5. The *three postulates or theorems of similarity* are _____, _____, and _____.

6. Like equality and congruence, triangle similarity is _____, _____, and _____.

7. If a line is parallel to one side of a triangle and intersects the other two sides in two distinct points, then it separates these sides into segments of proportional lengths. _____ _____ Theorem

8. A midsegment of a triangle is _____ to one side of the triangle, and its length is _____ the length of that side.

9. If three or more parallel lines intersect two transversals, then they cut off the transversals _____.

10. If three or more parallel lines cut off congruent segments on one transversal, then they cut off _____ segments on every transversal

11. An angle bisector in a triangle separates the opposite side into segments that have the same _____ as the other two sides

12. Similar triangles have perimeters in the same _____ as the corresponding sides

13. Corresponding angle bisectors, medians, and altitudes of similar triangles have lengths in the same ratio as _____-sides