Name _____   Date_____

Similar Figures

Similar figures have the same shape but can be of different sizes.
Two figures are similar if:
- their corresponding angles are congruent
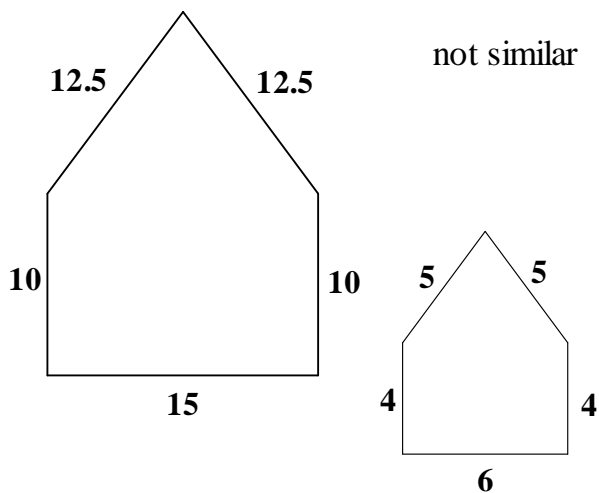- their corresponding sides are proportional

Part I:

Identify which of the following pairs of figures are similar.Circle the correct answer. (not necessarily drawn to scale)
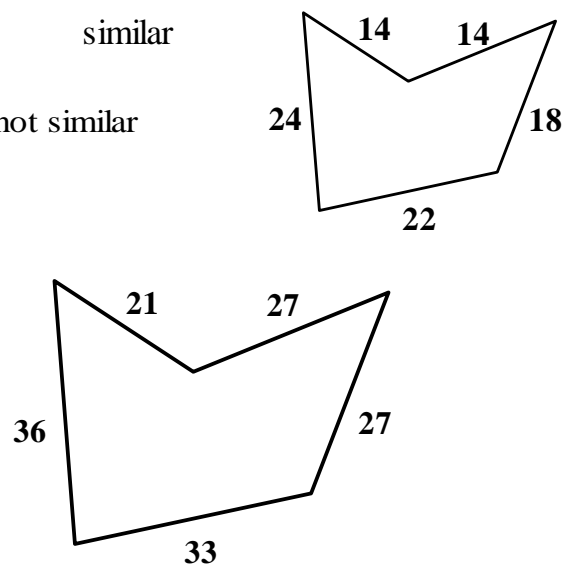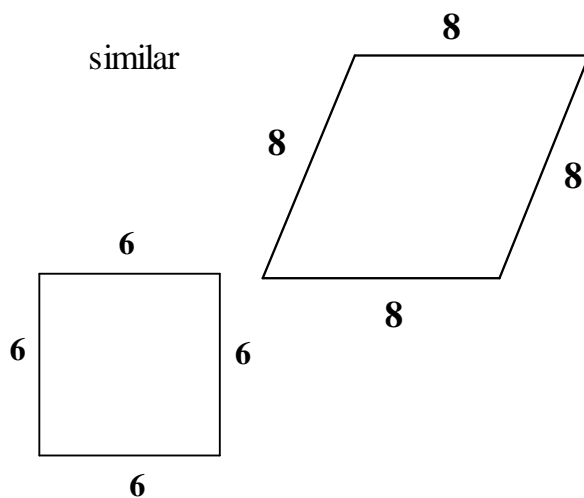
1.

similar

not similar

12.5   12.5

10   10

15

5   5

4   4

6

2.

similar

not similar

14   14

24   18

22

21   27

36   27

33

3.

not similar

similar

8

8   8

8

6

6   6

6

4.

not similar

similar

2.5

1   1

2.5

5

2   2

5
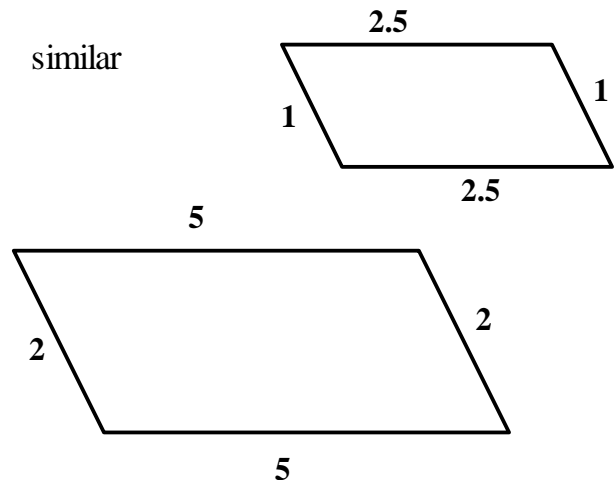
Part II: **B**   ΔABC and ΔDEF are similar triangles

26 **24**   **6.5**

A **C**   **D** **F**

10
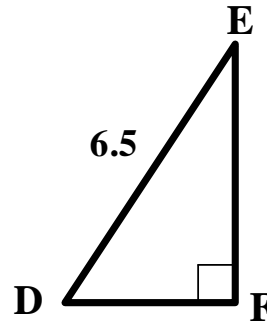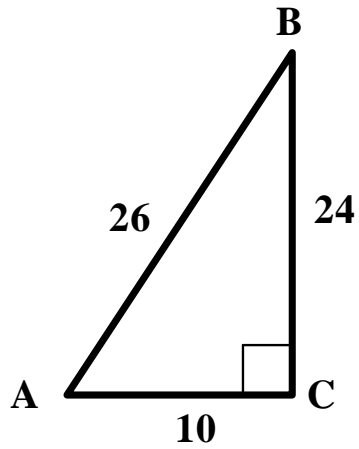
1. List all the pairs of cooresponding sides

2. List the pairs of congruent angles

_____   _____

_____   _____

_____   _____

3. What is the length of side DF?
Write out a proportion and solve it.

4. What is the length of side EF?
Write out a proportion and solve it.

5. a. Find the area of ΔABC.

6. a. What is the ratio of the length of
any side of ΔABC to the length of its
corresponding side of ΔDEF?

b. Find the area of ΔDEF.

b. What is the ratio of the area of ΔABC
to the area of ΔDEF

Part III:
For each of the following, answer the question.
If the answer is yes, explain why. If the answer is no, give a counter example.

1. Are any two right triangles similar?

2. Are any two isoscoles triangles similar?

3. Are any two equilateral triangles similar?

4. Are any two squares similar?

5. Are any two rectangles similar?

6. Are any two regular polygons with the same number of sides similar?