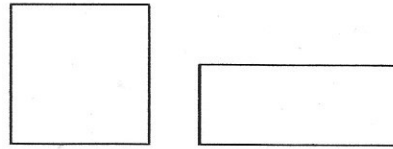1. Which of the following is **not** a characteristic of similar figures?

A. Proportional sides
B. Equal angle measurements
C. Same shape
D. Congruent side lengths

_____

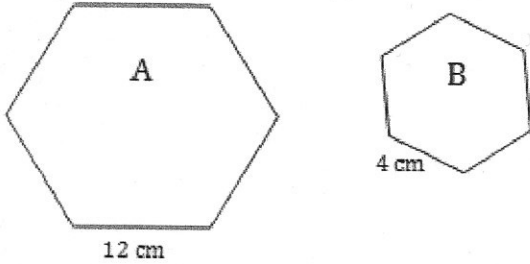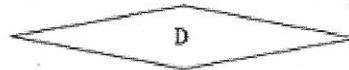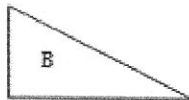2. Are the figures below similar? Explain.

_____
_____
_____

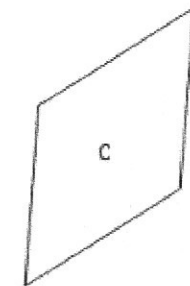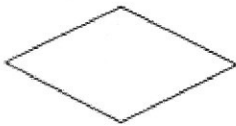3. Explain why figures A and B are similar.

A

B

4 cm

12 cm
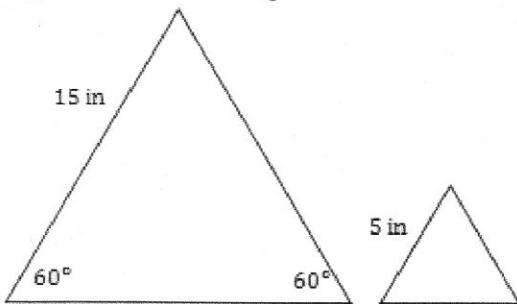
_____
_____
_____

4. Which of the figures is similar to the one below?

A

C

B

D

5. If the figures below are proportional, what is true about the angles of the smaller figure?

15 in

5 in

60°   60°

_____
_____
_____
_____
_____

Good Luck to _____**Date**_____**Period**_____

1. A point P has coordinates (-8, -2). What are its new coordinates after reflecting point P across the x-axis?

   [A] (-8, 2)   [B] (8, -2)   [C] (8, 2)   [D] (-2, -8)

3. Pentagon ABCDE is dilated with the origin as the center of dilation by a scale factor of 3.5. What will be the dilated coordinate of point C?
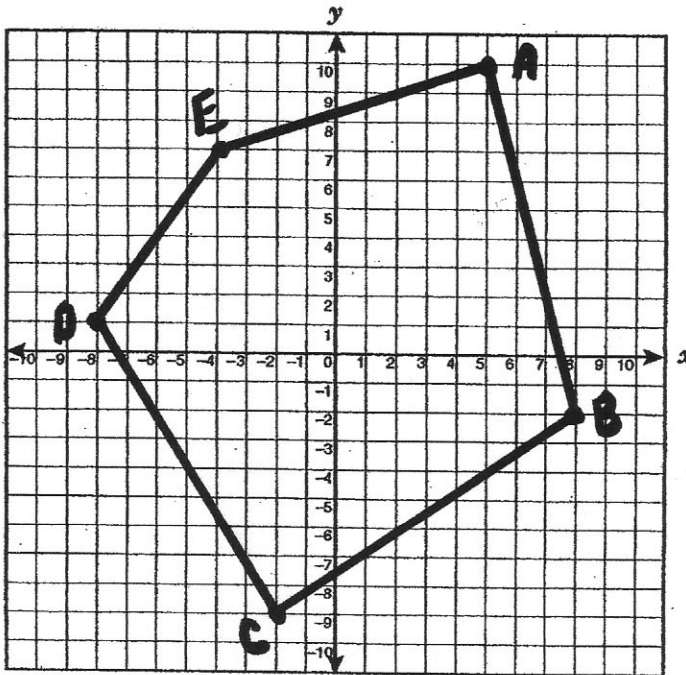
   [A] (-7, -31.5)   [B] (-5, -22.5)   [C] (-9, -40.5)   [D] (-1, -4.5)

4. A point Q with coordinates (-8, -6) is reflected across the y-axis. What are its new coordinates?

   [A] (8, 6)   [B] (8, -6)   [C] (-8, 6)   [D] (-6, -8)

5. Write the translation of point P(2, -9) to point P'(0, -12).

   [A] $(x, y) \rightarrow (x - 3, y - 2)$ [B] $(x, y) \rightarrow (x + 3, y + 2)$

   [C] $(x, y) \rightarrow (x + 2, y + 3)$ [D] $(x, y) \rightarrow (x - 2, y - 3)$

6. Which of the following is a dilation of triangle ABC with center of dilation (0,0)?

   Diagram follows . . .
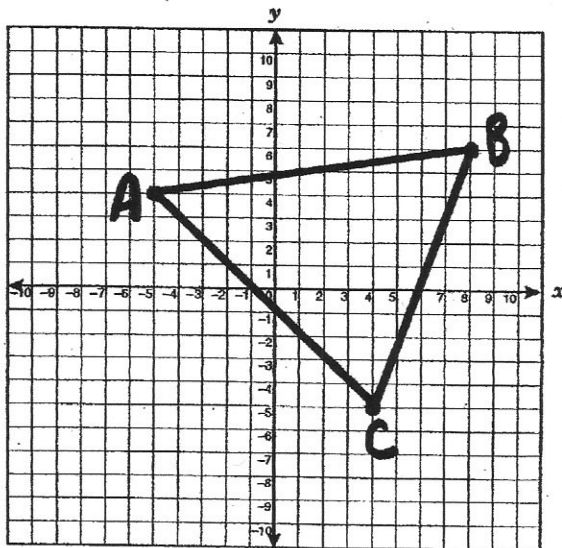
[A]   A' (-2.5, 2)   B' (8, 6)   C' (2, -2.5)

[B]   A' ($-\frac{5}{3}, \frac{4}{3}$)   B' ($\frac{8}{3}$, 2)   C' ($\frac{4}{3}, -\frac{5}{3}$)

[C]   A' (-1, 1)   B' (2, 1.5)   C' (1, -1.25)

[D]   A' (-2, 7)   B' (10.5, -12.5)   C' (-2, -1)

7. The coordinates of the preimage triangle DEF are D (- 4, 5), E (9, -2), F (0, -6). The coordinates of the image triangle D'E'F' are D'(-8, 10), E'(18, -4),   F' (0, -12) . What is the scale factor from the preimage to the image if the center of dilation is (0,0)?.

    [A] 2   [B] 3   [C] $\frac{1}{3}$ [D] $\frac{1}{2}$

8. Rectangle T'R'S'Q' is the dilation of rectangle TRSQ. What is the scale factor of the dilation?

    [A] 2   [B] 4   [C] $\frac{1}{4}$ [D] $\frac{1}{2}$

Diagram follows on next page ---
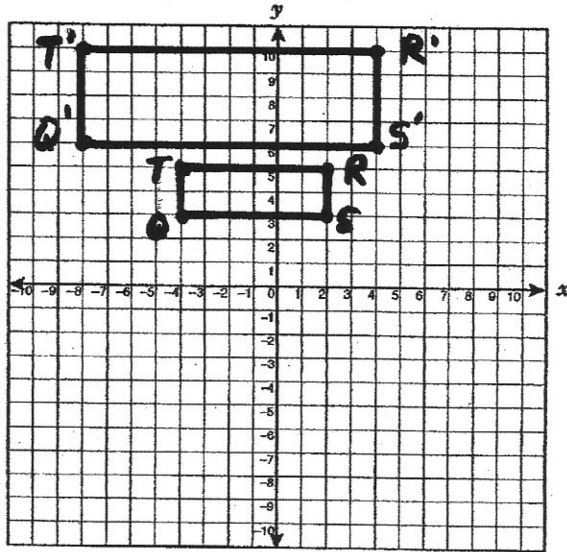
9. Your new T-shirt shrank slightly when it was washed and dried. What scale factor below could best describe this dilation?

   [A] 1.3   [B] 0.9   [C] 0.4   [D] 2.0

10. Graph the triangle whose vertices have the coordinates given below. Then draw its dilation using a scale factor of 2 and the origin as the center of dilation. Be sure to label triangle RST and triangle R'S'T'.

$$R (1, 4) \quad S(3, 0) \quad T(-1, -3)$$