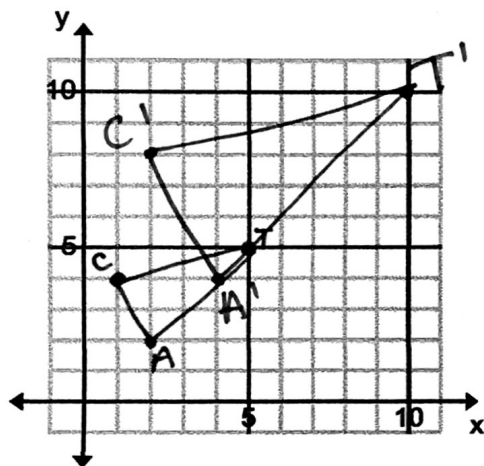


Name: key Period: _____ Score: _____**HW 8-4: Dilations**

Find the coordinates of the vertices of each figure after a dilation with the given scale factor k . Then graph the original image and the dilation.

1. $C(1,4)$, $A(2,2)$, $T(5,5)$; $k=2$

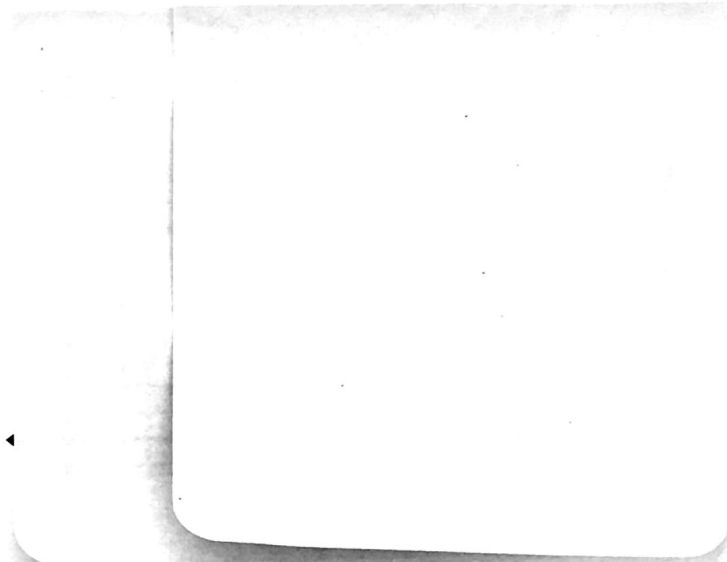


$C'(2,8)$

$A'(4,4)$

$T'(10,10)$

2. $R(2,2)$, $S(2,8)$, $T(6,8)$, $U(6,2)$;



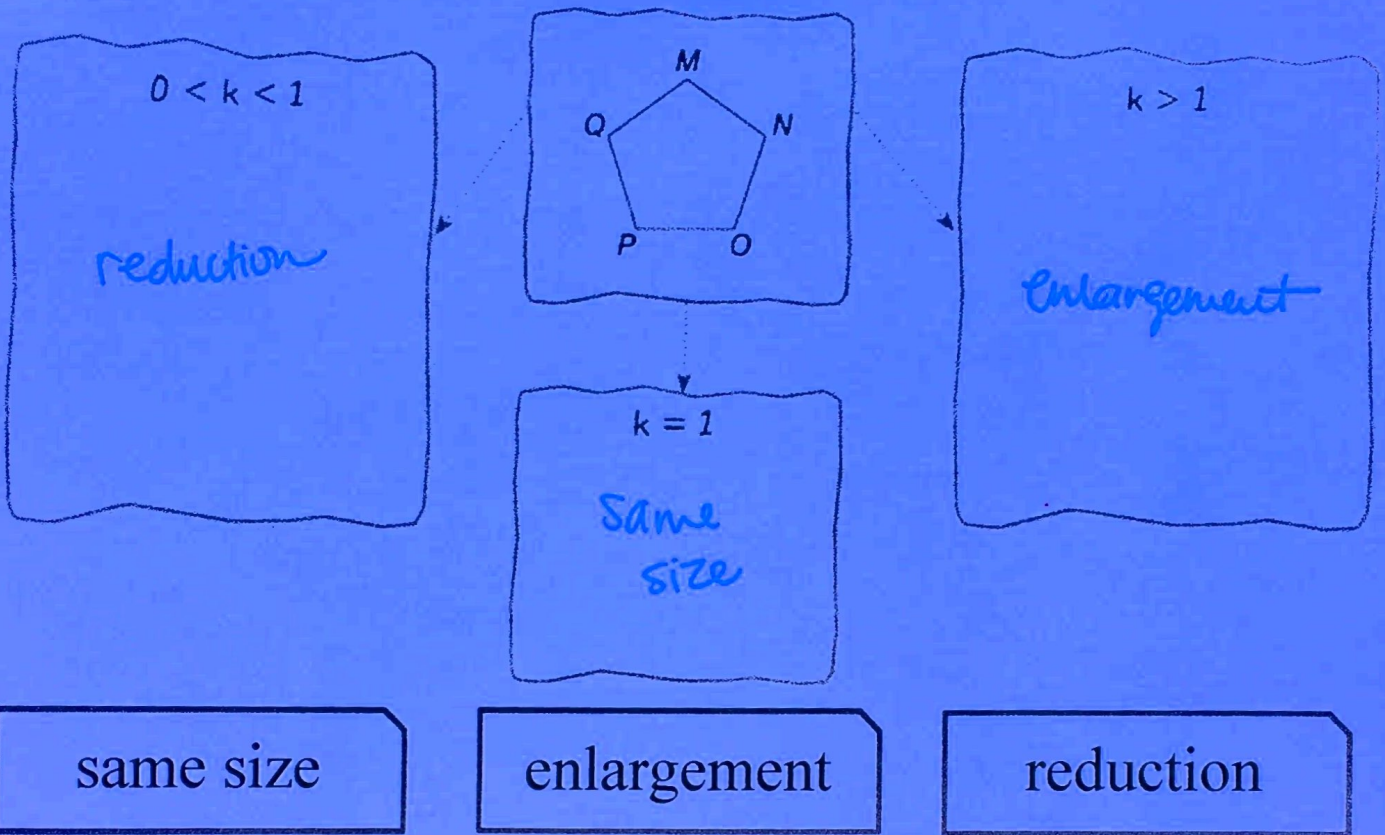
3. A graphic designer created a logo on 4×6 inch paper. In order to be placed on a business card, the logo needs to be 8×12 inches. What is the scale factor of the dilation?

$$k = 2$$

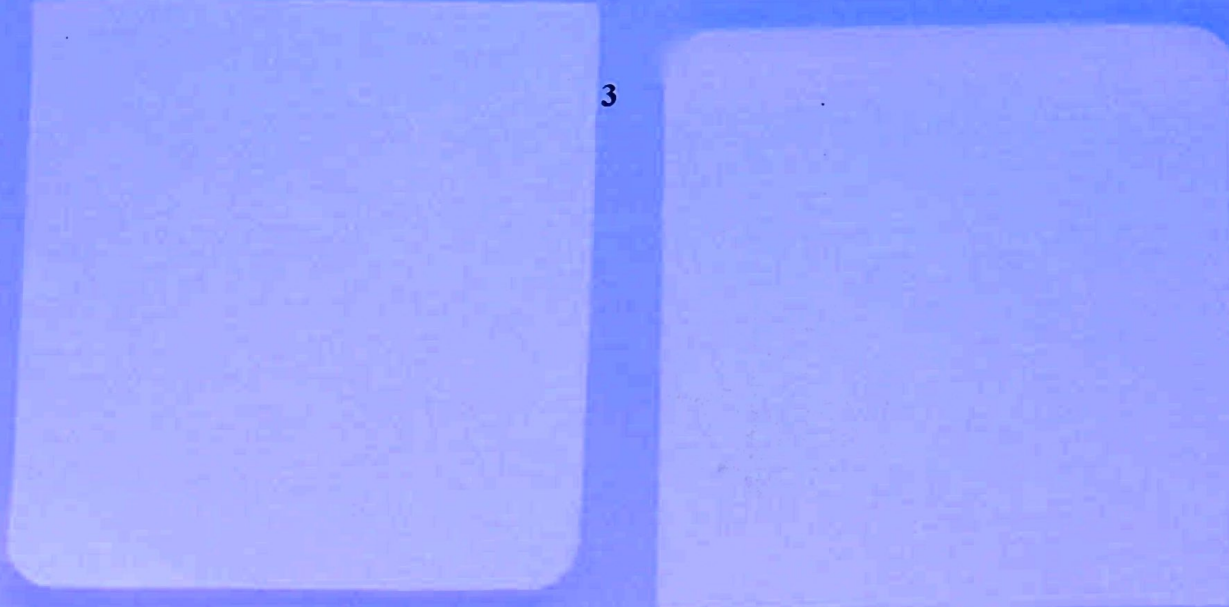
4. Darian wants a regulation pool that is 18 feet in length. The plans he ordered are 9 feet in length. The scale factor of the dilation he must use to build the

pool is 2. The scale factor of the dilation he must use to build the

5. In each part of the graph organizer, place the correct word to describe the image of pentagon $MNOPQ$ after a dilation within the given parameters.



6. Find the coordinates of the vertices of each figure after a dilation with the given scale factor k . Then

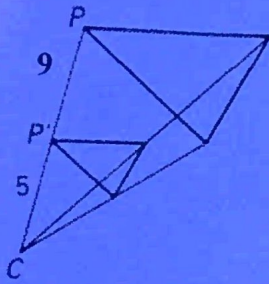


7. To place a picture in his class newsletter Joaquin will change the picture by a scale factor of 0.3. Find the dimensions of the reduced picture if the original is 15 centimeters wide and 10 centimeters high.

4.5cm wide
by 3cm high

The figure is shown along with its image after a dilation. Point

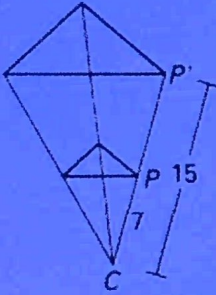
8.



a. Is th

b. Ider

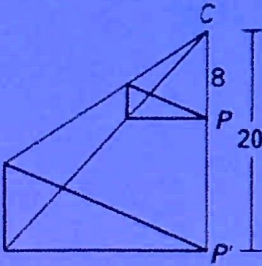
9.



a. Is the dilation an enlargement or reduction?

b. Identify the scale factor: $k = \frac{15}{7}$

10.



a. Is th

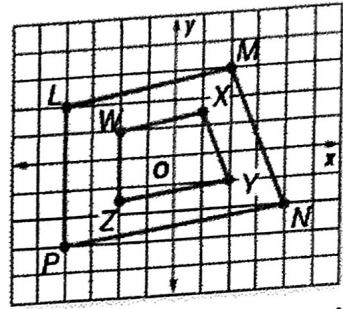
b. Ident

11. A triangle has vertices $A(3,4)$, $B(2,-1)$, and $C(-4,-5)$. After a dilation, $\Delta A'B'C'$ has vertices $A'(9,12)$, $B'(6,-3)$, and $C'(-12,-15)$. What is the scale factor of the dilation?

$$k=3$$

12. Square B is the result of a dilation of square A.

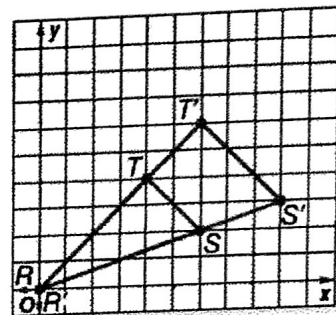
13. Quadrilateral WXYZ is the result of a dilation of quadrilateral LMNP.



Which number best represents the scale factor used to change quadrilateral LMNP into quadrilateral WXYZ?

- (F) 3 $\frac{1}{2}$
 (G) 2 (I) $\frac{1}{3}$

hown?



15. A line segment has endpoints $Q(-5, -6)$ and $P(-5, 1)$. Which of the following figures is the image after a dilation?

- (A) $Q'(-5, 6), P'(-5, -1)$ $Q'(-10, -12), P'(-10, 2)$
 (B) $Q'(5, -6), P'(5, 1)$ (D) $Q'(-6, -5), P'(1, -5)$