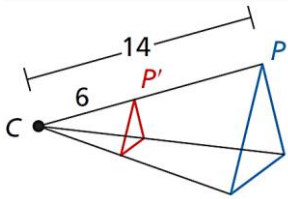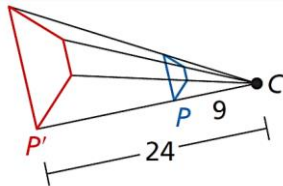Name: _____

4.2.D1 – DILATIONS

Past due on: _____ Period: _____

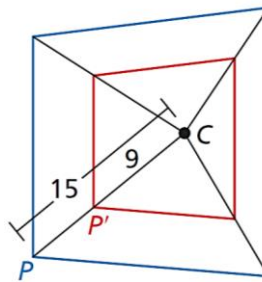Identify the scale factor of the dilation. Express in simplest form. Is the dilation a reduction or an enlargement?
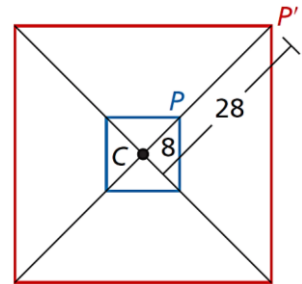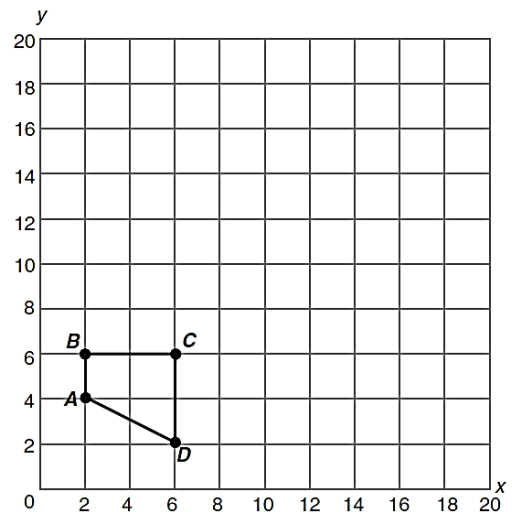
1.

2.

3.

4.

5. Use quadrilateral $ABCD$ shown on the grid to complete parts a and b.

   a. On the grid, draw the image of quadrilateral $ABCD$ dilated using a scale factor of 3 with the center of dilation at the origin. Label the image $JKLM$.

   b. On the grid, draw the image of quadrilateral $ABCD$ dilated using a scale factor of 0.5 with the center of dilation at the origin. Label the image $WXYZ$.
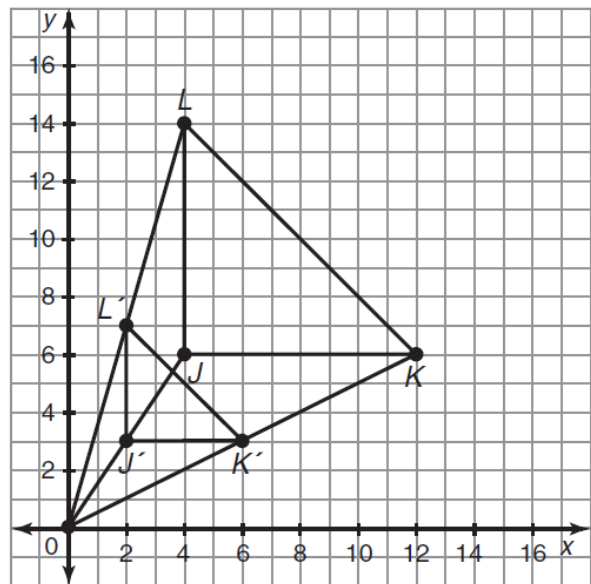

Given the image and pre-image, determine the scale factor. Is the dilation a reduction or an enlargement? Show how you obtained your answer.

6.
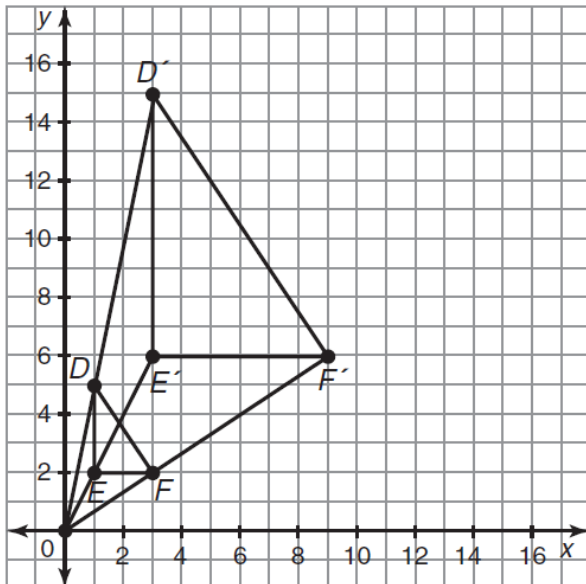
7.

8. What is the image of point $A(1,3)$ after a dilation with the center at the origin and a scale factor of 4?

9. The image of point A after a dilation of 3 is $(6,15)$. What was the original location of point A?

10. Under a dilation with respect to the origin, the image of $P(-15,6)$ is $P'(-5,2)$. What is the constant of dilation/scale factor?

11. Under a dilation where the center of dilation is the origin, the image of $A(-2,-3)$ is $A'(-6,-9)$. What are the coordinates of B', the image of $B(4,0)$ under the same dilation?

12. The red/larger triangle is a dilation of the blue/smaller triangle.
   What is the scale factor of the dilation?
   Find the values of x and y.

13. $\triangle L'M'N'$ is the image of $\triangle LMN$ with center of dilation P.
   What is the scale factor of the dilation?
   Find the values of x and y.