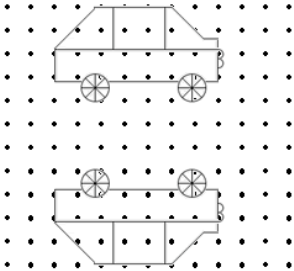


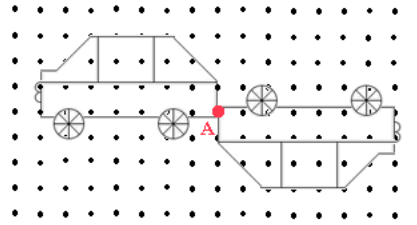
13.6 Rigid and Non Rigid Comparison and prediction

Name the type of transformation and if Rigid or Non Rigid

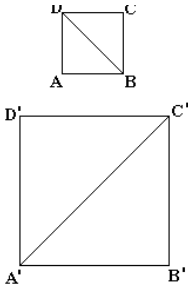
1. Type _____ Rigid/Non-Rigid



2. Type _____ Rigid/Non-Rigid



3. Type _____ Rigid/Non-Rigid



4. Type _____ Rigid/Non-Rigid

$$(x, y) \rightarrow (x + 2, y - 3)$$

5. Type _____ Rigid/Non-Rigid

$$(x, y) \rightarrow (2x, 2y)$$

6. Type _____ Rigid/Non-Rigid

$$(x, y) \rightarrow (-x, -y)$$

7. Type _____ Rigid/Non-Rigid

$$(x, y) \rightarrow (.25x, .25y)$$

8. Type _____ Rigid/Non-Rigid

$$(x, y) \rightarrow (-y, x)$$

Use the translation $(x, y) \rightarrow (y, -x)$. what type of transformation is this? _____

9. What is the image of $C'(10, -4)$?

10. What is the image of $D'(4, -3)$?

Use the translation $(x, y) \rightarrow (5x, 5y)$. What type of transformation is this? _____

11. What is the image of $A(15, 20)$?

12. What is the image of $B(-10, 0)$?

Use the translation $(x, y) \rightarrow (x + 5, y + 5)$. What type of transformation is this? _____

13. What is the image of $C'(10, -5)$?

14. What is the image of $D'(20, -100)$?

Directions: Write true or false for each of the statements.

_____ 15. If you translate a line in any direction, your pre-image line and post image line are not the same length.

_____ 16. If you dilate a line, your pre-image line and post image line are not the same length.

_____ 17. If an image is rotated the post image is congruent to the pre image.

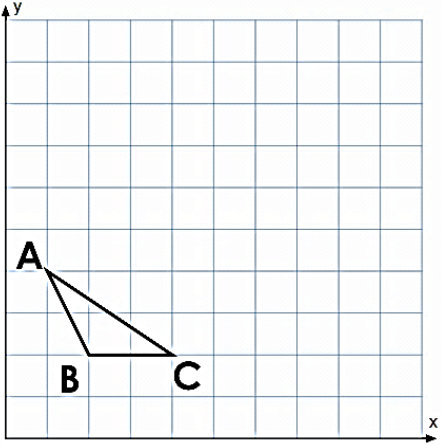
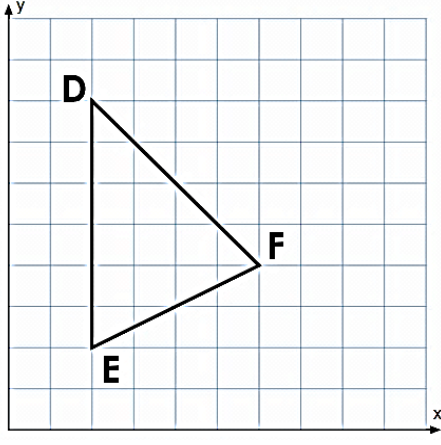
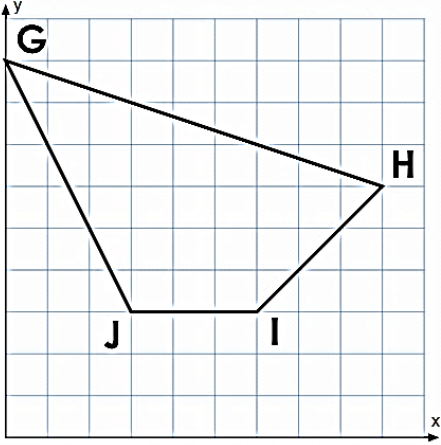
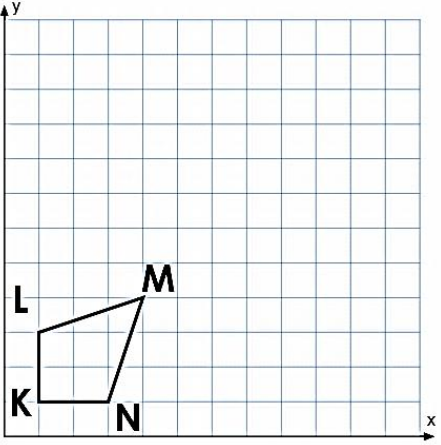
_____ 18. If an image is translated the post image is congruent to the pre image.

_____ 19. If an image is dilated the post image is congruent to the pre image.

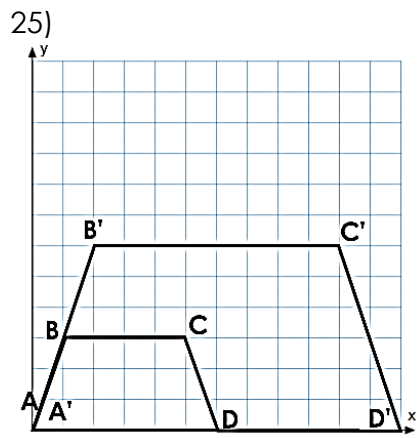
_____ 20. If an image is reflected the post image is congruent to the pre image.

Perform the indicated dilations below; be sure to label all your points. For each dilation:

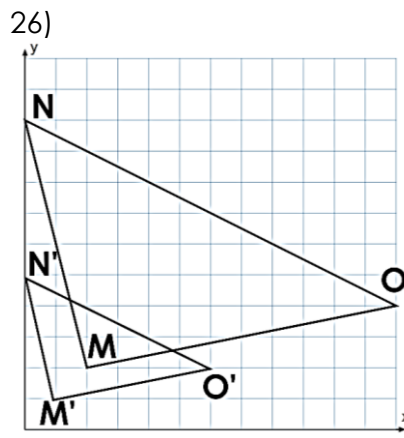
- 1) Identify the type of dilation.
- 2) Multiply each pre-image coordinate by the scale factor to create the image points.
- 3) Graph the new points and connect to form the image.

<p>21) Scale Factor: 2</p> 	<p>Type of Dilation: _____</p> <p>A: B: C: A': B': C':</p>
<p>22) Scale Factor: 1/2</p> 	<p>Type of Dilation: _____</p> <p>D: E: F: D': E': F':</p>
<p>23) Scale Factor: 1/3</p> 	<p>Type of Dilation: _____</p> <p>G: H: I: J: G': H': I': J':</p>
<p>24) Scale Factor: 3</p> 	<p>Type of Dilation: _____</p> <p>K: L: M: N: K': L': M': N':</p>

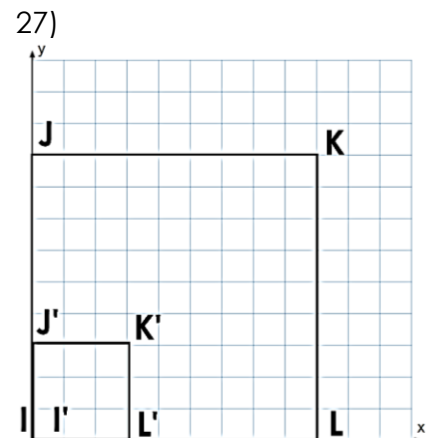
Write a rule to describe each dilation transformation.



Enlargement or Reduction
Scale Factor: _____



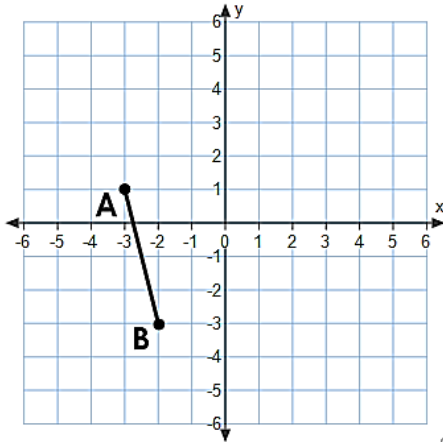
Enlargement or Reduction
Scale Factor: _____



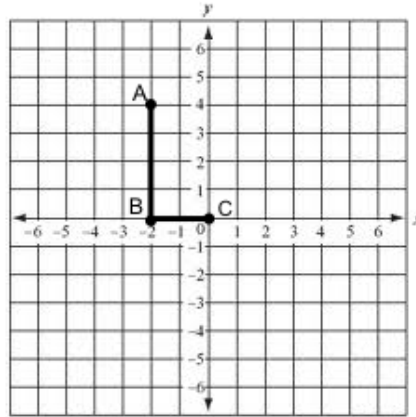
Enlargement or Reduction
Scale Factor: _____

Complete the following transformations.

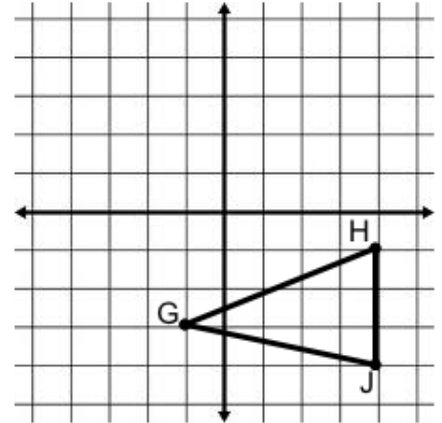
- 28) Reflect across the y-axis.
Label the new segment A' and B'.



- 29) Rotate 90° counter clockwise. Label the new segment A', B' and C'.



- 30) Translation: $(x - 4, y + 3)$
Label the new points G', H', J'.



- 31) Which transformation produce a pre-image and image that are similar?

Rigid versus Nonrigid Motion

Using the pre-image of the hand to the left, to determine the transformation(s) used to create the images *a – e* from the following list. Then determine if it's rigid or nonrigid.

- 31) Dilation and Translation



- 32) Rotation, Reflection, and Translation

- 33) Reflection and Translation

- 34) Rotation, Dilation, and Translation

- 35) Rotation and Translation

