Transformations – Isometries

G.CO.A.2 Hw Section 19.1 Name_____

1. Circle which of the following are isometric transformations? (there may be more than 1 answer) And determine which transformation took place by writing reflection, translation, rotation, dilation, stretch or other under each image.

Pre-Image

Image A

Dilation

Image B

Reflection

Image C

Rotation

2. Circle which of the following are isometric transformations? (there may be more than 1 answer) And determine which transformation took place by writing reflection, translation, rotation, dilation, stretch or other under each image.

Pre-Image

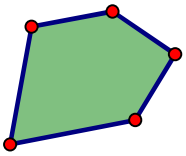
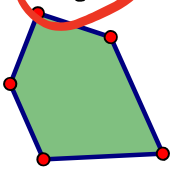
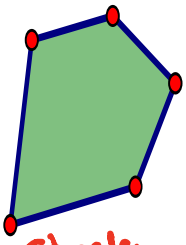


Image A



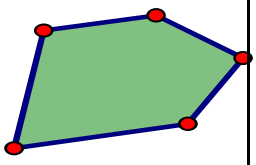
Rotation

Image B



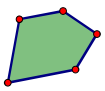
Stretch

Image C



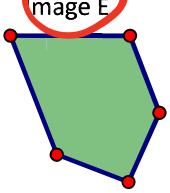
Stretch

Image D



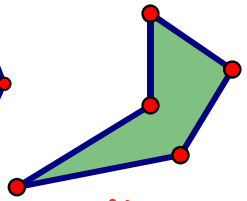
Dilation

Image E



Rotation

Image F



Other

3. Jane claims that any two circles are always isometric because the shape never changes. Is she correct?

YES or NO Explain your answer.

Isometric means congruent. Similar circles have the same shape but different sizes.

4. Determine if the pre-image and image are isometric and also write down which transformation (rotation, reflection, translation, dilation, stretch, or other) produced the image.

Preimage

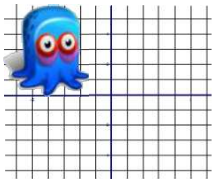
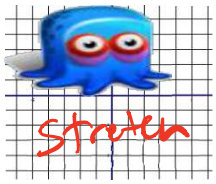
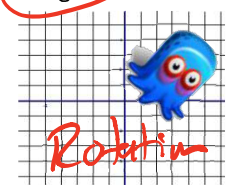


Image A



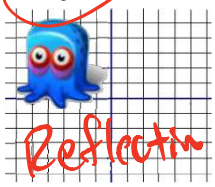
Stretch

Image B



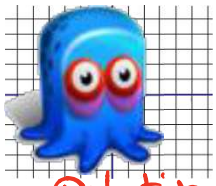
Rotation

Image C



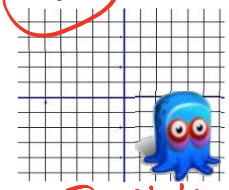
Reflection

Image D



Dilation

Image E



Translation

5. Determine if the pre-image and image are isometric and also write down which transformation (rotation, reflection, translation, dilation, stretch, or other) produced the image.

Preimage

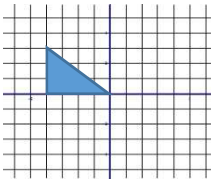
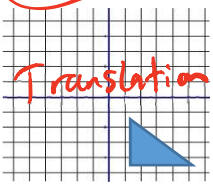
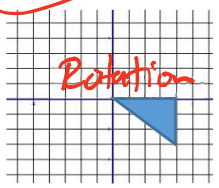


Image A



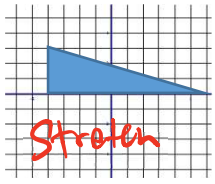
Translation

Image B



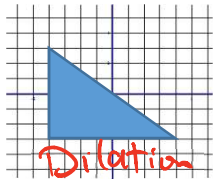
Rotation

Image C



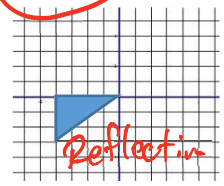
Stretch

Image D



Dilation

Image E

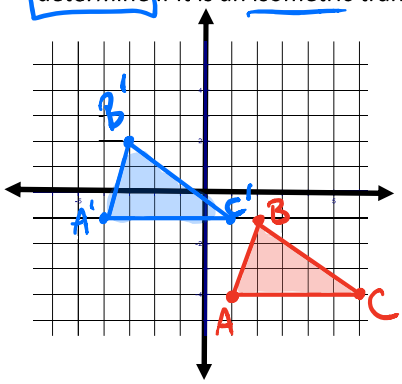


Reflection

Transformations – Isometries

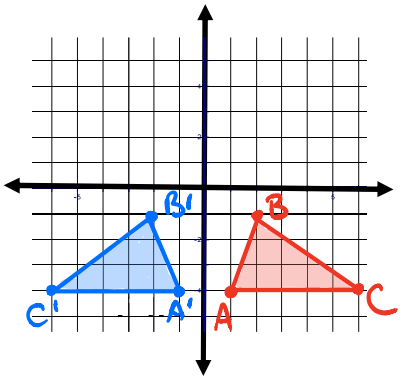
G.CO.A.2 Hw Section 19.1 Name_____

6. Plot the preimage triangle. Determine the coordinates of the image, plot the image and determine if it is an isometric transformation.



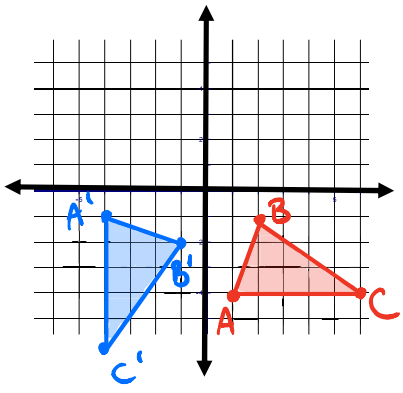
	Transformation
a) Pre-Image Points **A (1,-4)** **B (2,-1)** **C (6,-4)** Isometry? Yes or No Transformation Type: Translation	Coordinate Rule **(x,y) → (x – 5, y + 3)** Image Points A' (-4, -1) B' (-3, 2) C' (1, -1)

8. Plot the preimage triangle. Determine the coordinates of the image, plot the image and determine if it is an isometric transformation.



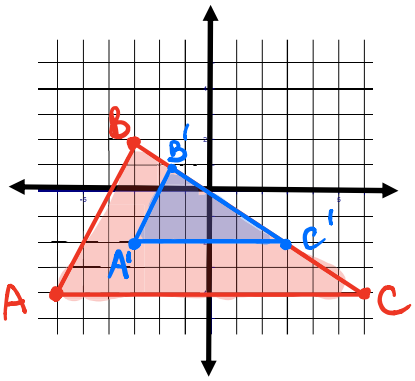
	Transformation
a) Pre-Image Points **A (1,-4)** **B (2,-1)** **C (6,-4)** Isometry? Yes or No Transformation Type: Reflection	Coordinate Rule **(x,y) → (-x, y)** Image Points A' (-1, -4) B' (-2, -1) C' (-6, -4)

7. Plot the preimage triangle. Determine the coordinates of the image, plot the image and determine if it is an isometric transformation.



	Transformation
a) Pre-Image Points **A (1,-4)** **B (2,-1)** **C (6,-4)** Isometry? Yes or No Transformation Type: Rotation	Coordinate Rule **(x,y) → (y, -x)** Image Points A' (-4, -1) B' (-1, -2) C' (-4, -6)

9. Plot the preimage triangle. Determine the coordinates of the image, plot the image and determine if it is an isometric transformation.



	Transformation
a) Pre-Image Points **A (-6,-4)** **B (-3,2)** **C (6,-4)** Isometry? Yes or No Transformation Type: Dilation	Coordinate Rule **(x,y) → (.5x, .5y)** Image Points A' (-3, -2) B' (-1.5, 1) C' (3, -2)