

What Is An Isometry?

G.CO.A.2

Quick Concept: An **Isometry** is a transformation in the plane that preserves distance, angle measure, shape, and size..... all things about the shape. In other words, **an isometric transformation produces an identical (or congruent) shape.**

1) Circle which of the following are isometric transformations.

Pre-Image



a)



b)



c)



d)



e)

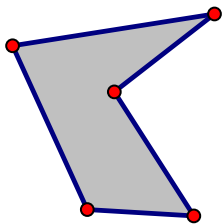


f)

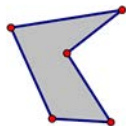


2) Circle which of the following are isometric transformations.

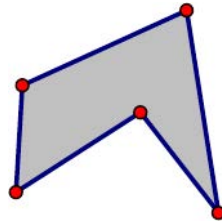
Pre-Image



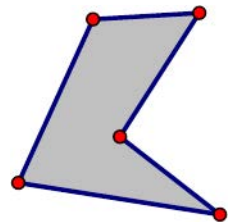
a)



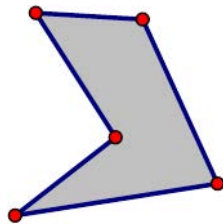
b)



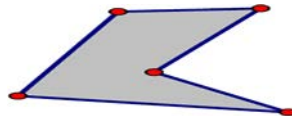
c)



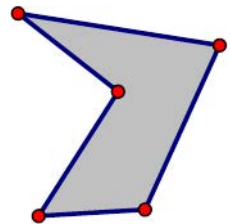
d)



e)



f)

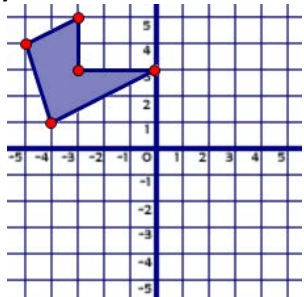
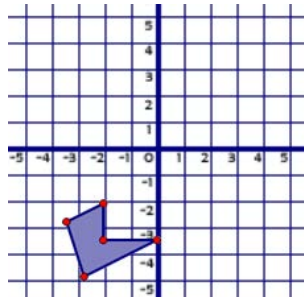
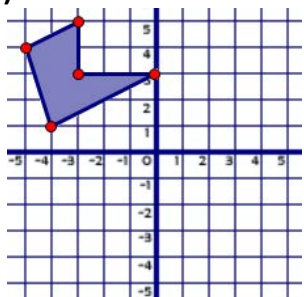
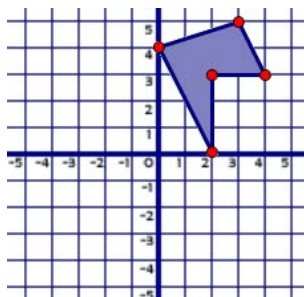
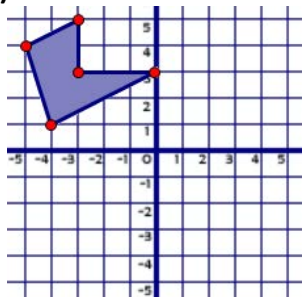
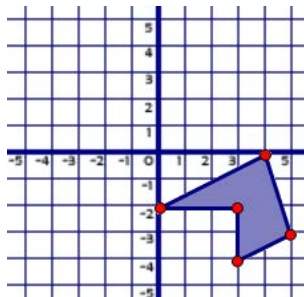
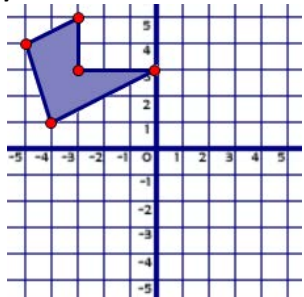
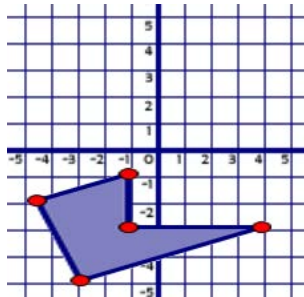
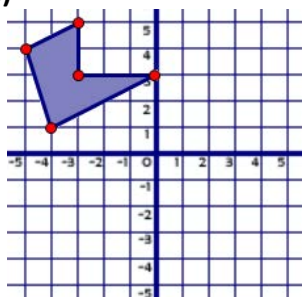
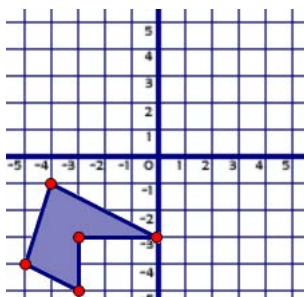


3) Which transformations are isometric?

4) Determine if the pre-image and image are isometric and also which transformation produced the image.

| PRE-IMAGE | IMAGE | Circle Answer | Circle Transformation |
|-----------|-------|-------------------------------------|--|
| <p>a)</p> | | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |
| <p>b)</p> | | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |
| <p>c)</p> | | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |
| <p>d)</p> | | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |
| <p>e)</p> | | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |

5. Determine if the pre-image and image are isometric and also which transformation produced the image.

| PRE-IMAGE | IMAGE | Circle Answer | Circle Transformation |
|---|---|-------------------------------------|--|
| <p>a)</p>  |  | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |
| <p>b)</p>  |  | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |
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| <p>e)</p>  |  | <p>ISOMETRY</p> <p>NOT ISOMETRY</p> | <p>Rotation</p> <p>Reflection</p> <p>Translation</p> <p>Dilation</p> <p>Stretch</p> <p>Other</p> |