Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Unit 8 Review**

Monica

Geometry Period:\_\_\_\_

Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Directions:** Questions 1 – 10 are multiple choice. Choose the best answer for each question. For questions 11 – 15, read the question carefully and be sure to answer the question being asked!

 1) What are the coordinates of , the image of , after a counterclockwise rotation of 90º about the origin?

 1) (-2, 4) 2) (-2, -4) 3) (-4, 2) 4) (-4, -2)

 2) What are the coordinates of point  after it is reflected over the *x*-axis?

1. (2,3) 2) (-2, 3) 3) (-2, -3) 4) (-3, 2)

3) A translation moves  to . What are the coordinates of the image of point  under the same translation?

 1) (0, -9) 2) (-5, -3) 3) (-6, -1) 4) (-6, -9)

 4) What are the coordinates of point ** under dilation ?

 1) (-2, 8) 2) (2, -8) 3) (-8, 2) 4) (8, -2)

 5) What is the image of point  after the composition of transformations defined by ?

 1) (-4, 2) 2) (4, -2) 3) (-4, -2) 4) (2, -4)

 6) A transformation of a polygon that always preserves both length and orientation is

 1) Dilation 2) Translation 3) Line reflection 4) Glide reflection

 7) The vertices of parallelogram *ABCD* are , , , and . If *ABCD* is reflected over the *x*-axis, how many vertices remain invariant?

 1) 1 2) 2 3) 3 4) 0

 8) Which transformation is *not* always an isometry?

 1) Rotation 2) Translation 3) Reflection 4) Dilation

9) The rectangle *ABCD* shown in the diagram below will be reflected across the *x*-axis. What will *not* be preserved?



|  |  |
| --- | --- |
| 1) | slope of  |
| 2) | parallelism of  and  |
| 3) | length of  |
| 4) | measure of  |

 10) Which type of transformation is illustrated in the accompanying diagram?



|  |  |
| --- | --- |
| 1) | dilation |
| 2) | reflection |
| 3) | translation |
| 4) | rotation |

 11) On the coordinate plane below, graph the equation . Graph the image of this equation under the transformation . Write the equation of this graph.



 12) The coordinates of the vertices of  ,  and . On the grid below, graph and label , the result of the composite transformation . State the coordinates of , , and . Is this an isometry? Why or why not?

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13) On the accompanying set of axes, draw , whose coordinates are ,  and . Then draw, label, and state the coordinates of , the image of  after the transformation that maps  to . Based on your diagram, identify the type of transformation that was performed.



**CHALLENGE:** Design your own transformation question! It could earn you an ES!