

# Unit 4 Study Guide

1. What are the two tools used for constructions and what figures do they make?

**Straight edge**  
& **Compass**

2. List three different transformations and give their definitions.

**Translation** – “slide” to move along a straight path

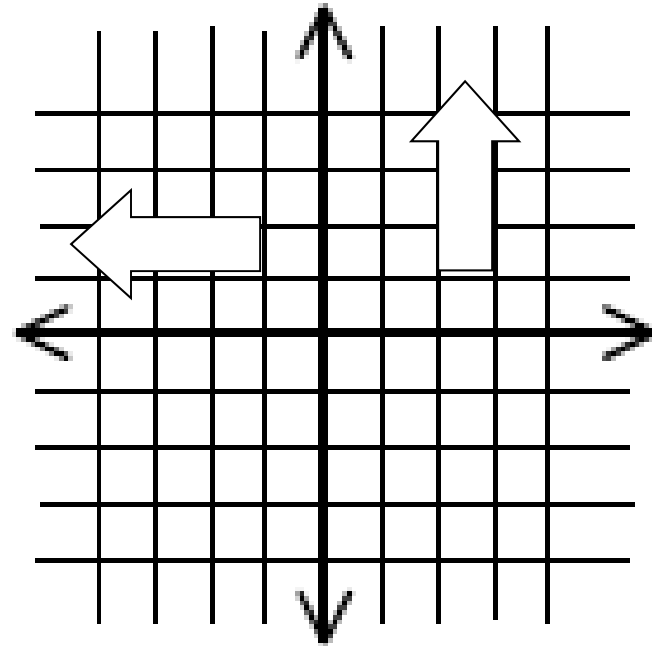
**Reflection** – “flip” to flip over a line of reflection

**Rotation** – “turn” to turn around a given point

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3. What type of transformation does the diagram represent?

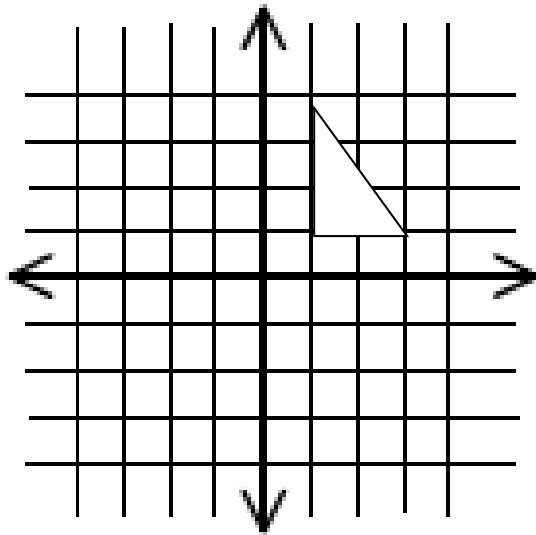
**Rotation**



A

## Unit <sup>B</sup>4<sub>C</sub> Study Guide

4. What are the coordinates of the reflection of the triangle below over the y - axis?



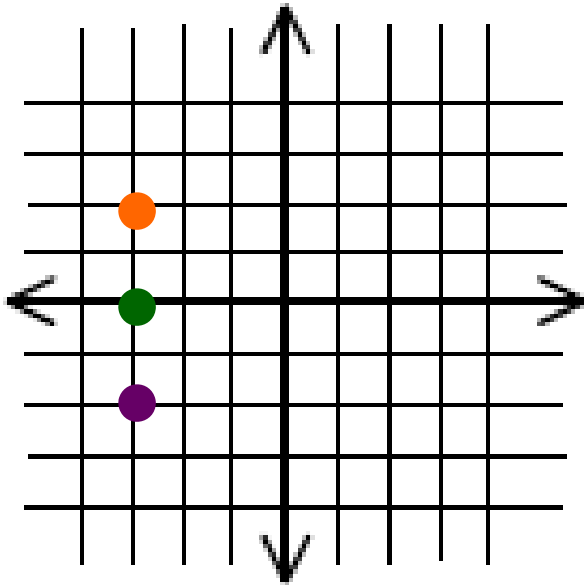
$$A' ( \underline{-1} , \underline{4} )$$

$$B' ( \underline{-1} , \underline{1} )$$

$$C' ( \underline{-3} , \underline{1} )$$

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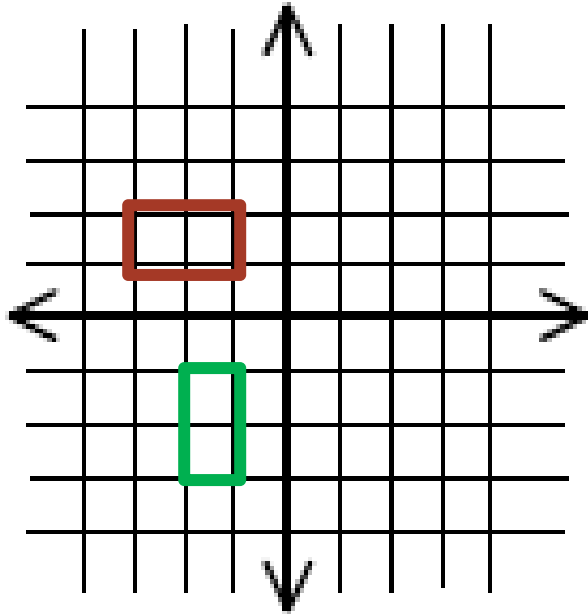
5. Jerry plots the point  $(-3, 2)$  on a coordinate grid for a scavenger hunt. He tells the participants how to get to the next coordinate by reflecting the point over the x axis and then translating it up 2 units. What coordinate should the participants go to next?



**$(-3, 0)$**

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6. The restaurant, Hef-r-la proposed a building location at the coordinates of  $(-1, 1)$ ,  $(-3, 1)$ ,  $(-1, 2)$ , and  $(-3, 2)$ . The company decides to move the location and the builder must re-position the building by rotating it 270 degrees clockwise. What would the new coordinates of the building be? What quadrant will the building move to?



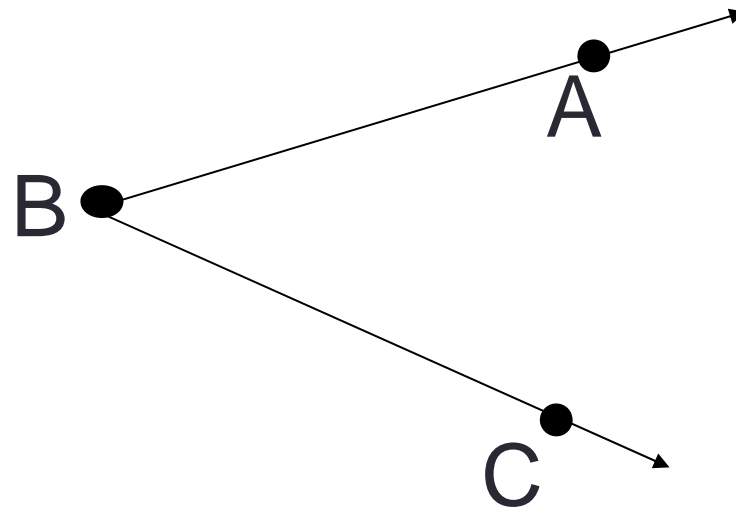
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7. Using the following angle, show the three different names it can be call by.

$\angle$  **ABC**

$\angle$  **CBA**

$\angle$  **B**



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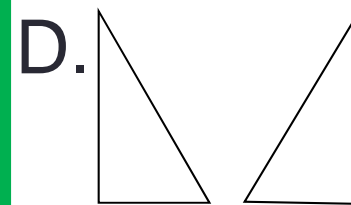
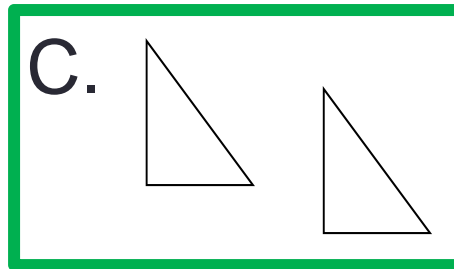
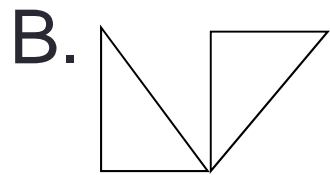
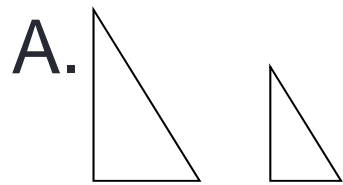
8. John wants to place a sign on Hunnicut Road. He chooses to bisect Hunnicut Road, which is 22 miles long, and place the sign there. How many miles down Hunnicut Road will the sign be posted?

**11 miles**

Bisect - cut into 2 equal pieces

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9. Which diagram represents a translation?



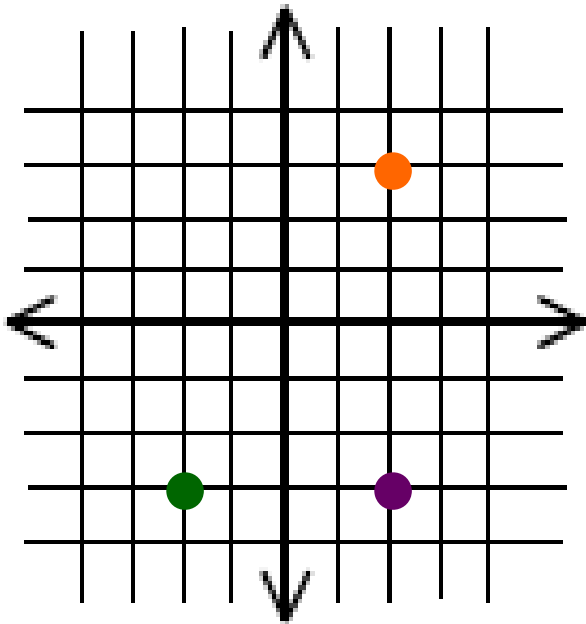
10. The second hand on a clock moves from 5 seconds to 20 seconds. What type of transformation has occurred?

**Rotation**

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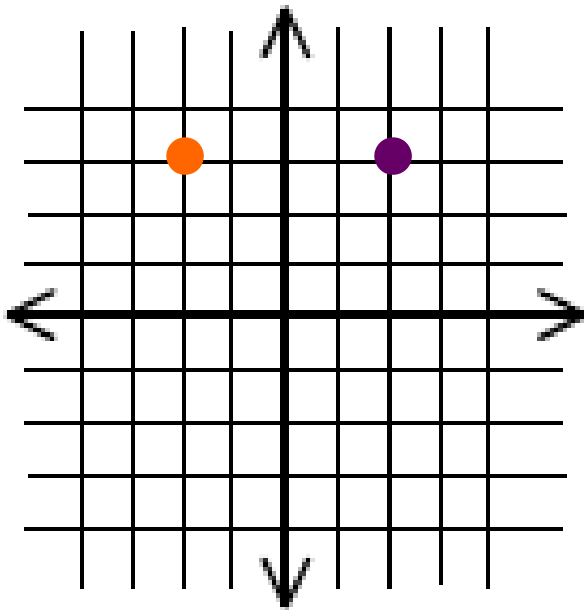
11. The point  $(2, 3)$  is reflected across the x axis, then translated 4 units left. What is the new coordinate?

**$(-2, -3)$**



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12. Point G at coordinate  $(-2, 3)$  is rotated  $90^\circ$  counterclockwise. What is the new coordinate of point H? What quadrant will the point move to?



**$(2, 3)$  – quadrant 1**