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## Transformations Unit 3 Review

TRANSLATIONS

1. What is the image of $(-4,6)$ after the translation $(x, y) \rightarrow(x-5, y-2)$ ?
2. What is a rule to describe the translation of left 2 and up 5? (x,y) $\rightarrow$ ( )
3. Translate triangle RST 4 units right and 5 unit down. Label the new triangle R'S'T'.

4. Translate figure CDEF 6 units left and 2 units down. Label the new triangle C'D'E'F'.


## REFLECTIONS

5. What is the image of $(-1,-3)$ after the reflection across the x-axis?
6. Which is a rule to describe the reflection over the $y$ axis? $\quad(x, y) \rightarrow(\quad, \quad)$
7. Reflect triangle RST over the x -axis.. Label the new triangle R'S'T'.

8. Reflect figure CDEF over the y-axis. Label the new figure C'D'E'F'.


## ROTATIONS

9. Rotate figure $\mathrm{ABC} 90^{\circ}$ clockwise around the origin. Label the new figure $A^{\prime} B^{\prime} C^{\prime}$.

Write the coordinates for the new figure.
$A^{\prime}(\quad) \quad B^{\prime}(\quad) \quad C^{\prime}(\quad)$

10. Rotate figure $\mathrm{ABC} 90^{\circ}$ counter-clockwise around the origin.

| Write the coordinates for the new figure. |
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| $D^{\prime}(\quad) E^{\prime}(\quad) F^{\prime}\left(\quad G^{\prime}(\quad)\right.$ |



## DILATIONS

11. What is the image of $(3,5)$ after the dilation with scale factor 2 ?
12. Which is a rule to describe a dilation of $1 / 3$ ? $(x, y) \rightarrow(\quad, \quad)$
13. Perform a dilation on the figure with a scale factor of 2.

14. Perform a dilation on the figure with a scale factor of $1 / 2$.

