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| **Location and Transformations in the Cartesian Plane** | | | |
| Reads and interprets the Cartesian plane.  A graphing of a quadratic function  Description automatically generated  “The *x*-axis looks like a horizontal number line and the *y*-axis looks like a vertical number line, and  the two number lines intersect.” | Locates points on a Cartesian plane using ordered pairs.  A graphing of a quadratic function  Description automatically generated  “Point A is at (4, 5), Point B  is at (8, -3), Point C is at (-2, -7), and Point D is at (-3, 2).” | Uses coordinates to plot points on a Cartesian plane.    A graph of a quadratic function  Description automatically generated  “I plotted Point E(5, 0)  and Point F(0, −4).” | Models and describes the location of the vertices of a polygon in the Cartesian plane using coordinates.  A graph of a quadrilateral with lines and dots  Description automatically generated  “I drew a parallelogram.  Its vertices are at E(1, 6), F(3, 2), G(−2, −3), and H(−4, 1).” |
| **Observations/Documentation** | | | |
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| **Location and Transformations in the Cartesian Plane (cont’d)** | | | |
| Describes and performs transformations of polygons on a Cartesian plane.  A graph of a triangle with lines and points  Description automatically generated  “I translated △ABC right 3 squares and down 5 squares  to get △A’B’C’.” | Identifies transformation used to move a polygon on a Cartesian plane.  A graph of a graph of a rectangle and a rectangle  Description automatically generated  “The shape was rotated  90° counterclockwise about T  to get the image. The shape  and its image are congruent  but have different orientations.” | Relates the coordinates of a polygon and its image after a translation, reflection, or rotation.    A graph of a graph of triangles and a picture of a triangle  Description automatically generated with medium confidence  “After a reflection in the *y*-axis,  the *x*-coordinates of the vertices change sign, and the *y*-coordinates stay the same.” | Flexibly visualizes and predicts where the image of a polygon will be after a transformation.  A graph of a function  Description automatically generated  “I can picture the Polygon’s reflection, Image 1, on the other side of the *y*-axis, and the Polygon’s reflection, Image 2, on the other side of the *x*-axis. Each time, matching vertices will be the same distance from the line of reflection and the polygon, and its image  will have opposite orientations.” |
| **Observations/Documentation** | | | |
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