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| **Transformations on the Cartesian Plane** |
| Describes translations, reflections, and rotations about the origin on a Cartesian plane using mapping rules(*x*, *y*) → (*x* – 20, *y* – 10) | Describes dilations about the origin on a Cartesian plane using mapping rulesVertices of initial shape:(–2, 2), (–2, –6), (6, –6), and (6, 2).Vertices of image: (–1, 1), (–1, –3), (3, –3), and (3, 1).(*x*, *y*) → (0.5*x*, 0.5*y*) | Performs and describes combinations of transformationsTriangle A is reflected in the *y*-axis and translated left 2 and down 5.(*x*, *y*) → (–*x*, *y*) then(*x*, *y*) → (*x* – 2, *y* – 5) Or (*x*, *y*) → (–*x* – 2, *y* – 5) | Predicts the result of combinations of transformationsTriangle A with vertices at (–2, 1), (–6, 1), and (–6, 3) is dilated by a scale factor of 2 and translated left 2 and down 5.Dilation: (*x*, *y*) → (2*x*, 2*y*)Translation: (*x*, *y*) → (*x* – 2, *y* – 5) Or, (*x*, *y*) → (2*x* – 2, 2*y* – 5)  |
| **Observations/Documentation** |
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