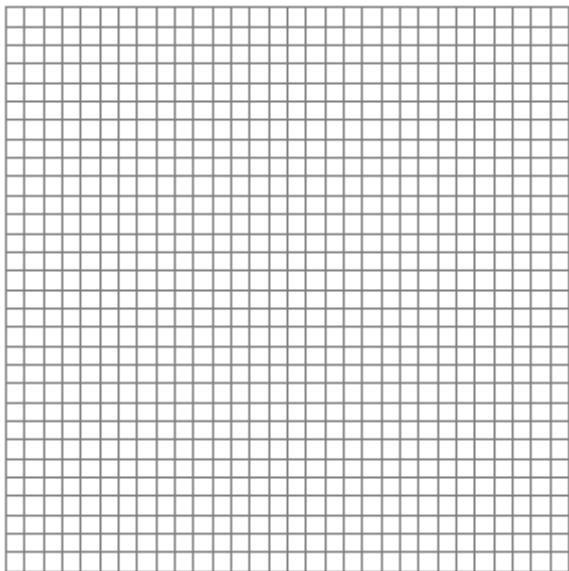


NAME: _____

G.G.55: Investigate, justify, and apply the properties that remain invariant under translations, rotations, reflections, and glide reflections

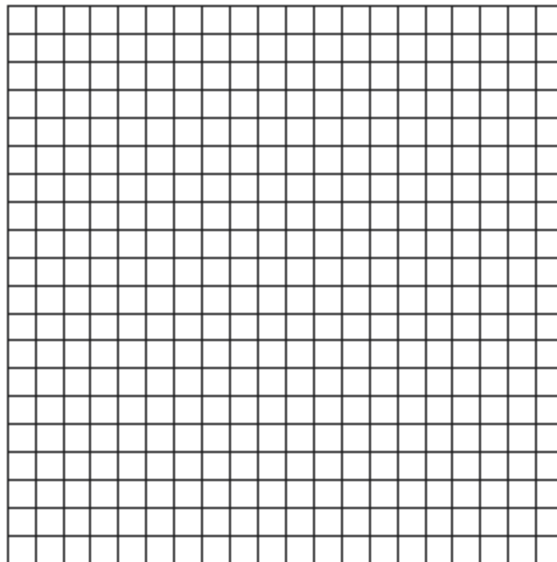
1. fall0830ge, P.I. G.G.55

The vertices of $\triangle ABC$ are $A(3,2)$, $B(6,1)$, and $C(4,6)$. Identify and graph a transformation of $\triangle ABC$ such that its image, $\triangle A'B'C'$, results in $\overline{AB} \parallel \overline{A'B'}$.



2. 080937ge, P.I. G.G.55

Triangle DEG has the coordinates $D(1,1)$, $E(5,1)$, and $G(5,4)$. Triangle DEG is rotated 90° about the origin to form $\triangle D'E'G'$. On the grid below, graph and label $\triangle DEG$ and $\triangle D'E'G'$. State the coordinates of the vertices D' , E' , and G' . Justify that this transformation preserves distance.



G.G.55: Investigate, justify, and apply the properties that remain invariant under translations, rotations, reflections, and glide reflections

[2] A correct transformation is stated and drawn, such as a translation, a dilation, a reflection through the origin, a rotation of 180° around the origin, or any description of a transformation.

[1] A correct transformation is stated, but the graph is missing or incorrect.

or [1] A correct graph is drawn, but a transformation is not stated or is stated incorrectly.

or [1] Appropriate work is shown, but one conceptual error is made.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[1] incorrect procedure.

[4] $D'(-1,1)$, $E'(-1,5)$, $G'(-4,5)$, $\triangle DEG$ and $\triangle D'E'G'$ are graphed and labeled correctly, and an appropriate justification is given, such as showing congruent segments or stating that all rotations preserve distance.

[3] Appropriate work is shown, but one computational, graphing, or labeling error is made.

or [3] Appropriate work is shown, but no justification is given.

or [3] Appropriate work is shown, but the coordinates are not stated or are stated incorrectly.

[2] Appropriate work is shown, but one computational, graphing, or labeling error is made, and no justification is given.

or [2] Appropriate work is shown, but two or more computational, graphing, or labeling errors are made.

or [2] Appropriate work is shown, but one conceptual error is made.

or [2] Both triangles are graphed and labeled correctly, but no further correct work is shown.

[1] Appropriate work is shown, but one conceptual error and one computational, graphing, or labeling error are made.

or [1] Both triangles are graphed correctly, but no further correct work is shown.

or [1] $D'(-1,1)$, $E'(-1,5)$, $G'(-4,5)$, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[2] incorrect procedure.