***Bridget Blockhead***

Coordinates for Bridget:

(0, 3) (2, 3) (2, 7) (-2, 7) (-2, 3) (0, 3) (-½, 2) (-4 ½, 2) (-8, 0) (-4, 0) (-½, 2) (-4, -4)

(-2, -4) (-2, -8) (-4, -10) (4, -10) (2, -8) (2, -4) (4, -4) (½, 2) (4, 0) (8, 0) (4 ½, 2) (½, 2)

Connect the last point to the first to complete Bridget.

Part 1) Write the rule, or the ”result” for each of Bridget’s transformations, then graph the transformations, starting with the original Bridget coordinates. Use a different color for each transformation, but put them all on one piece of graph paper.

|  |  |  |
| --- | --- | --- |
| Bridget | Transformation | Result |
| (x, y) | Right 5 | (x + 5, y) |
| (x, y) | Left 4 and up 1 |  |
| (x, y) | Vertical stretch of 2 |  |
| (x, y) | Horizontal shrink of ½ |  |
| (x, y) | Reflect across the x-axis |  |
| (x, y) | Reflect across the line x = 2 |  |
| (x, y) | Rotate 90° counterclockwise |  |

On the back of your graph paper:

Part 2) Draw “Bob Blockhead” using the rule (2x, 2y).

Part 3) Draw “Betty Blockhead” using the rule (.5x, .5y)

Part 4) Draw “Block Blockhead” using the rule (x, 2y).

Use a different color for each character.

On a second piece of graph paper:

Part 5) On a full sheet of graph paper, draw Bridget Blockhead in the center of the paper. Draw Bob Blockhead on the center of the paper, and draw Betty Blockhead on Bob’s left shoulder. Use a different color for each character.

Rubric

Part 1) 1 point for each correct rule and 1 point for each correct drawing, 14 points total.

Part 2) Full points given for correct drawing, 7 points.

Part 3) Full points given for correct drawing, 7 points.

Part 4) Full points given for correct drawing, 7 points.

Part 5) 7 points for drawing Bridget correctly, 7 points for drawing Bob correctly, 7 points for drawing Betty correctly, 21 points total.

56 points total.