Name _____ Date _____

1. Use the plane to the right to complete the following tasks.

   a. Draw a line s whose rule is x *is always 5*.

   b. Plot the points from Table A on the grid in order. Then, draw line segments to connect the points in order.

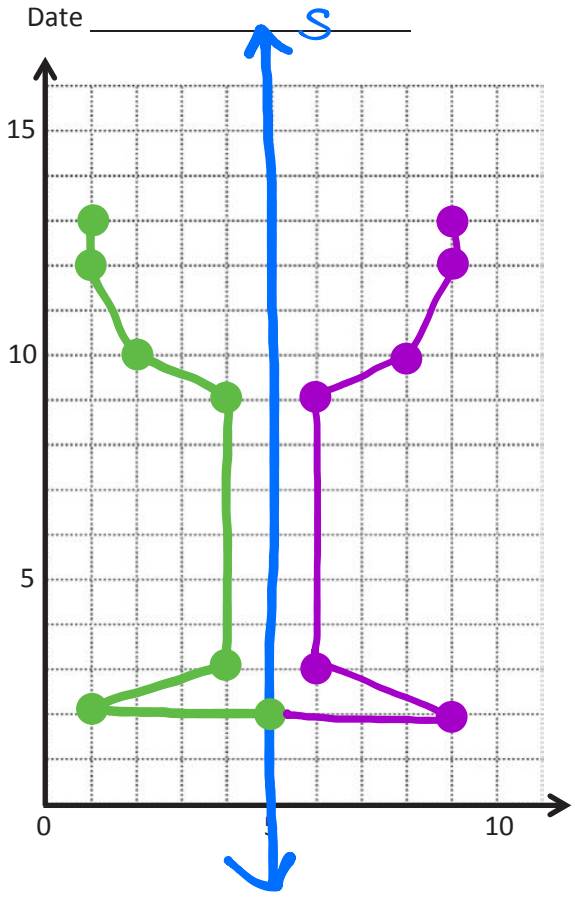


Table A

(x, y)
(1, 13)
(1, 12)
(2, 10)
(4, 9)
(4, 3)
(1, 2)
(5, 2)

Table B

(x, y)
(9,13)
(9, 12)
(8, 10)
(6,9)
(6,3)
(9,2)
(5,2)

   c. Complete the drawing to create a figure that is symmetric about line s. For each point in Table A, record the symmetric point on the other side of s.

   d. Compare the y-coordinates in Table A with those in Table B. What do you notice?

The y coordinates of Table A are the same as the y coordinates of Table B.

   e. Compare the x-coordinates in Table A with those in Table B. What do you notice?

The difference of the x coordinate of Table A and 5 will be the same as the difference of the x coordinate of Table B and 5. In other words the X coordinates of Table A and Table B are always the same distance from the line of symmetry.

2. Use the plane to the right to complete the following tasks.

   a. Draw a line $\boldsymbol{p}$ whose rule is, *y is equal to x*.

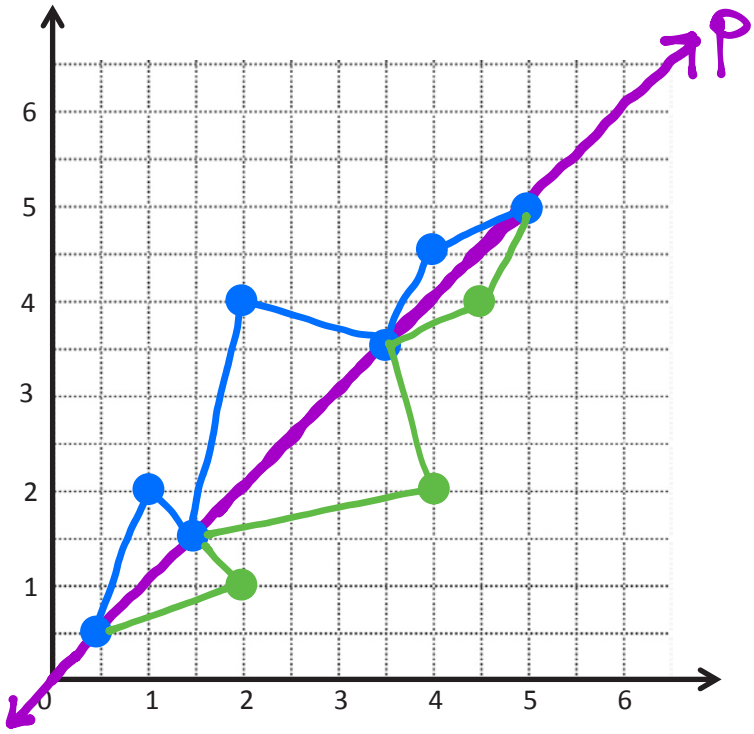
   b. Plot the points from Table A on the grid in order. Then, draw line segments to connect the points.

Table A

(x, y)
$(\frac{1}{2}, \frac{1}{2})$
(1, 2)
$(1\frac{1}{2}, 1\frac{1}{2})$
(2, 4)
$(3\frac{1}{2}, 3\frac{1}{2})$
$(4, 4\frac{1}{2})$
(5, 5)

Table B

(x, y)
$(\frac{1}{2}, \frac{1}{2})$
(2, 1)
$(1\frac{1}{2}, 1\frac{1}{2})$
(4, 2)
$(3\frac{1}{2}, 3\frac{1}{2})$
$(4\frac{1}{2}, 4)$
(5, 5)



   c. Complete the drawing to create a figure that is symmetric about line $\boldsymbol{p}$. For each point in Table A, record the symmetric point on the other side of the line $\boldsymbol{p}$ in Table B.

   d. Compare the y-coordinates in Table A with those in Table B. What do you notice?

The y-coordinates of Table A become the x-coordinates of Table B.

   e. Compare the x-coordinates in Table A with those in Table B. What do you notice?

The x-coordinates of Table A become the y-coordinates of Table B.