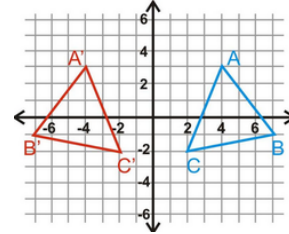


REFLECTIONS

Reflections: a movement of a figure that involves flipping the figure over the give line of reflection

The new prime points will be the same distance from the line of reflection as the original points but on opposite side of the line of reflection (also known as line of symmetry)



Types of Reflection

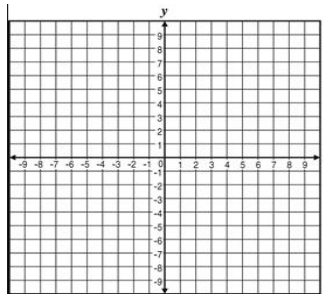
Reflecting over y-axis:

Example: Plot points A(-2,3), B(-6,3), and C(-2,7)

Step 1: Plot original points

Step 2: From each original point, count the number of units from the y-axis and move the same distance on the opposite side of the y-axis

Step 3: List the new 'prime' ordered pairs



Reflect over y-axis

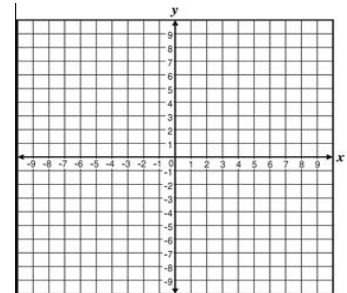
Original Prime

J(-1,0) →

I(-2,0) →

H(-3,-3) →

K(-2,5) →



Types of Reflection

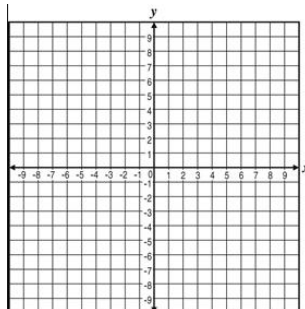
Reflecting over x-axis

Example: Plot points A(3,2), B(7,2), and C(7,6)

Step 1: Plot original points

Step 2: From each original point, count the number of units from the x-axis and move the same distance on the opposite side of the x-axis

Step 3: List the new 'prime' ordered pairs



Reflect over x-axis

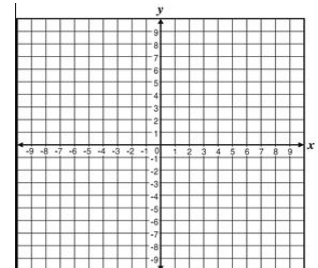
Original Prime

K(-5,-4) →

L(-5,-2) →

M(-1,-3) →

N(-4,-4) →



Types of Reflections

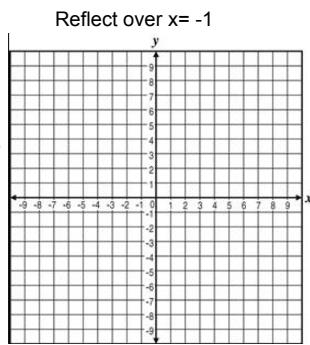
Reflecting over a line:

Example: Plot points S(-4,-3), T(-4,-1), U(1,0), and V(1,-5)

Step 1: Plot original points

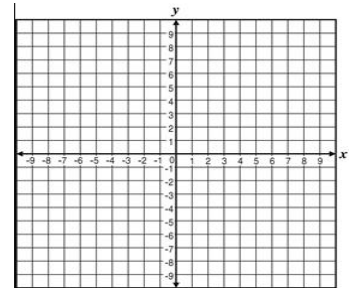
Step 2: From each original point, count the number of units from the line and move the same distance on the opposite side of the line

Step 3: List the new 'prime' ordered pairs



Reflect over $y = 2$

Original Prime
 C(0,1) →
 D(1,4) →
 E(4,2) →



Method 2:

When reflecting over the **x-axis**, the x value will _____ and the y value will become its _____

When reflecting over the **y-axis**, the y value will _____ and the x value become its _____

Without a Graph: Example 1

Plot points A(-2, 3), B(-6, 3), and C(-2, 7) and reflect over the x-axis:

- A (-2, 3) reflected over the x-axis A' _____
- B (-6, 3) reflected over the x-axis B' _____
- C (-2, 7) reflected over the x-axis C' _____

Without a Graph: Example 2

Plot points A(-2, 3), B(-6, 3), and C(-2, 7) and reflect over the y-axis:

- A (-2, 3) reflected over the y-axis A' _____
- B (-6, 3) reflected over the y-axis B' _____
- C (-2, 7) reflected over the y-axis C' _____

Describe the rule of reflection:

