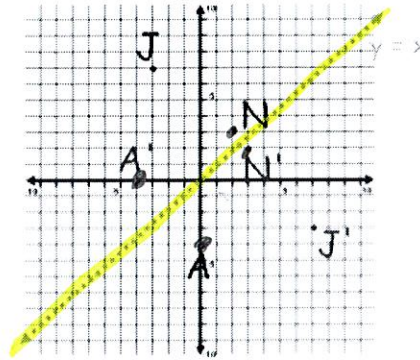


Line of Reflection: $y = x$

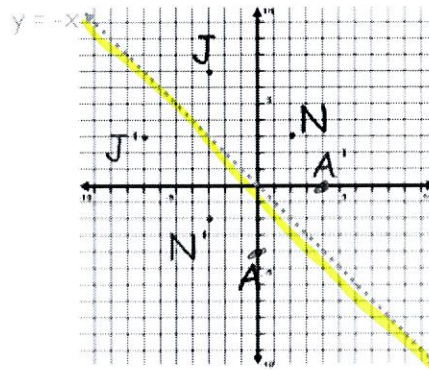
| Pre-Image | Image |
|-----------|-------------|
| J (-3, 7) | J' (-7, -3) |
| A (0, -4) | A' (-4, 0) |
| N (2, 3) | N' (3, 2) |



When reflecting a point in the line $y = x$, what happens to the coordinates? *They switch places*
 So, (x, y) becomes (y, x)

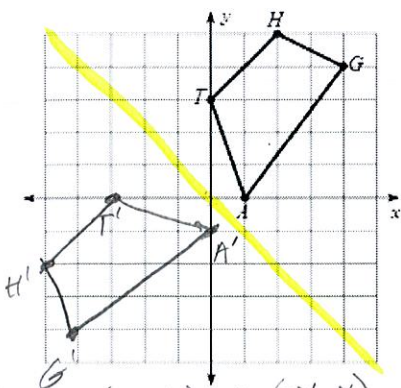
Line of Reflection: $y = -x$

| Pre-Image | Image |
|-----------|-------------|
| J (-3, 7) | J' (-7, 3) |
| A (0, -4) | A' (4, 0) |
| N (2, 3) | N' (-3, -2) |



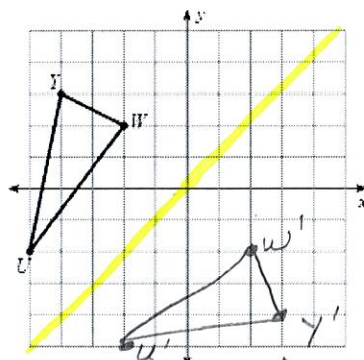
When reflecting a point in the line $y = -x$, what happens to the coordinates? *They switch places + switch signs*
 So, (x, y) becomes $(-y, -x)$

Ex. 1 Reflect over $y = -x$.



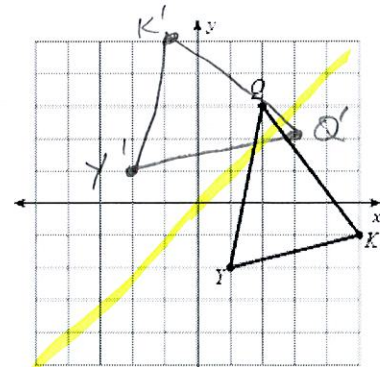
$(x, y) \rightarrow (-y, -x)$
 A (1, 0) \rightarrow A' (-1, 0)
 T (0, 3) \rightarrow T' (-3, 0)
 H (2, 5) \rightarrow H' (-5, -2)
 G (4, 4) \rightarrow G' (-4, -4)

Ex. 2 Reflect over $y = x$.



$(x, y) \rightarrow (y, x)$
 Y (-4, 3) \rightarrow Y' (3, -4)
 U (-5, -2) \rightarrow U' (-2, -5)
 W (-2, 2) \rightarrow W' (2, -2)

Ex. 3 Reflect over $y = x$.



$(x, y) \rightarrow (y, x)$
 K (5, -1) \rightarrow K' (-1, 5)
 Y (1, -2) \rightarrow Y' (-2, 1)
 Q (2, 3) \rightarrow Q' (3, 2)