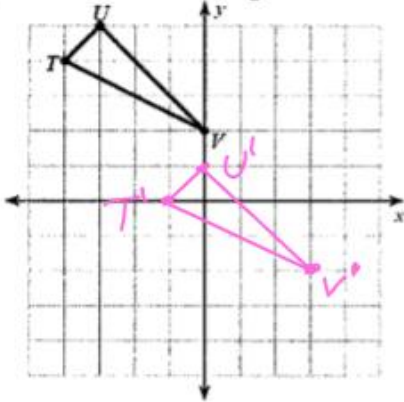


Today we continued notes on transformations from Friday. We reviewed the concept of translations, then took notes and practiced reflections.

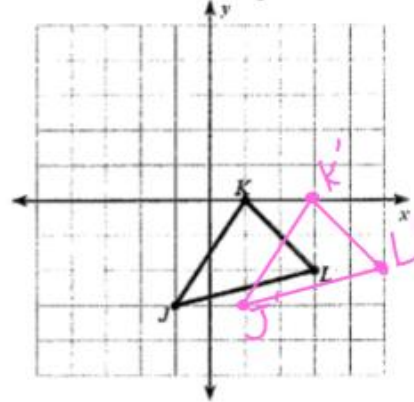
pg 25

Find the coordinates of the vertices of each figure after the given transformation and graph the image.

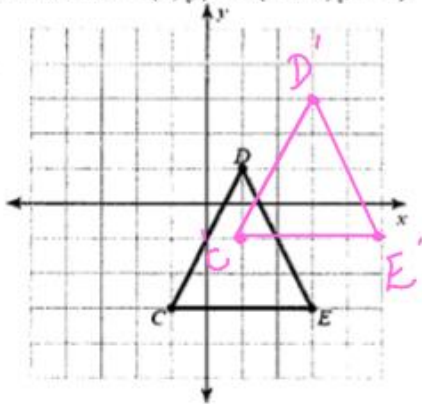
7) translation: 3 units right and 4 units down



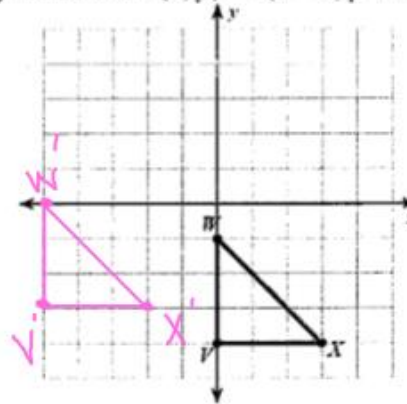
8) translation: 2 units right



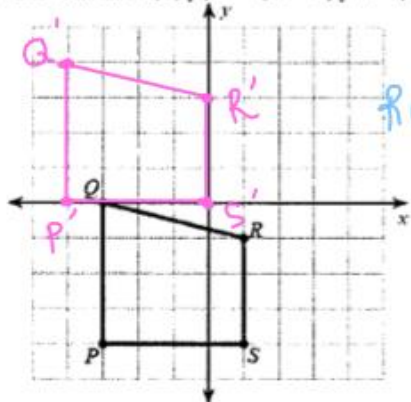
9) translation: $(x, y) \rightarrow (x + 2, y + 2)$



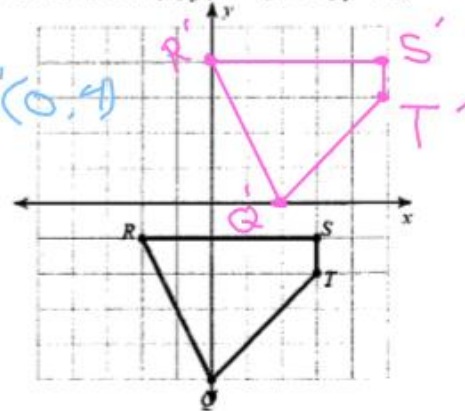
10) translation: $(x, y) \rightarrow (x - 5, y + 1)$



11) translation: $(x, y) \rightarrow (x - 1, y + 4)$



12) translation: $(x, y) \rightarrow (x + 2, y + 5)$



$R(-2, -1) \rightarrow R'(0, 4)$

Unit 1

Transformations

In the Coordinate Plane

1

Translations

2

Translate $(x - 9, y + 8)$

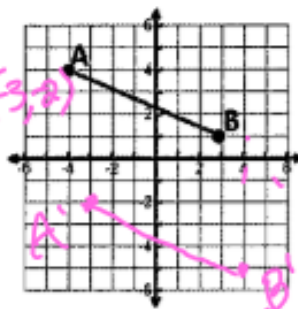
$C(-9, 12) \rightarrow (-9-9, 12+8) \rightarrow C'(-18, 20)$

$O(-12, -4) \rightarrow O'(-21, 4)$

$W(22, -19) \rightarrow W'(13, -11)$

3

Translate $(x + 1, y - 6)$



4

Reflections

Reflect across the x-axis

$$(x, y) \rightarrow (x, -y)$$

Change the sign of the y-value

5

Reflect across the x-axis

$D(-2, 4) \rightarrow D'(-2, -4)$

$I(0, -8) \rightarrow I'(0, 8)$

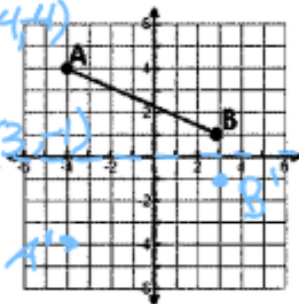
$G(-3, 5) \rightarrow G'(-3, -5)$

6

Reflect across the x-axis

$$A(-4,4) \rightarrow A'(-4,-4)$$

$$B(3,1) \rightarrow B'(3,-1)$$



7

Reflect across the y-axis

$$(X, Y) \rightarrow (-X, Y)$$

Change the sign of the x-value

8

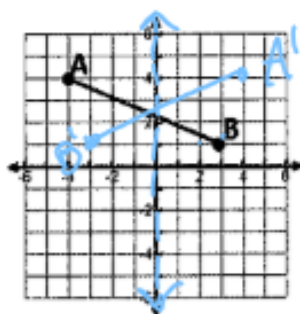
Reflect across the y-axis

$$C(1,2) \rightarrow C'(-1,2)$$

$$A(-3,-5) \rightarrow A'(3,-5)$$

$$T(4,-1) \rightarrow T'(-4,-1)$$

9

Reflect across the y-axis

10

Reflect across $y = x$

$$(X, Y) \rightarrow (Y, X)$$

Swap x and y

11

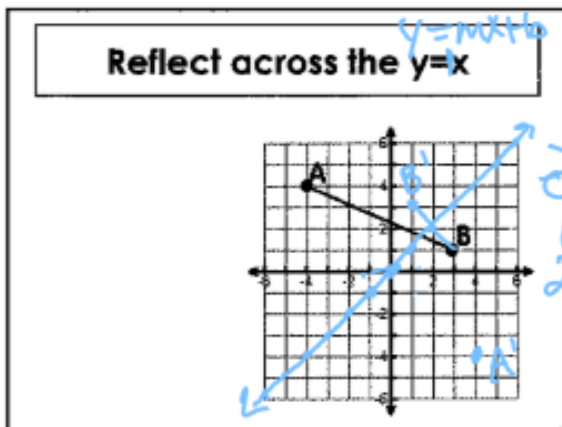
Reflect across $y = x$

$$B(-7,-12) \rightarrow B'(-12,-7)$$

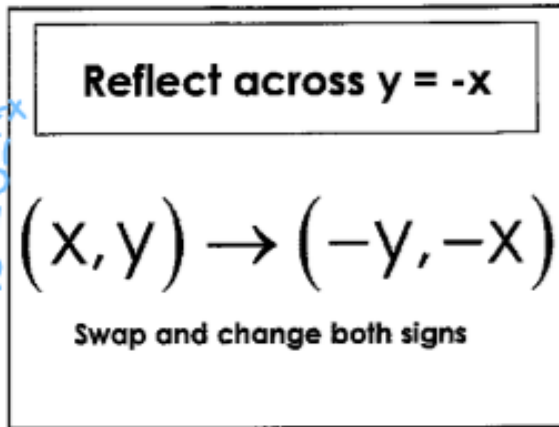
$$I(8,-2) \rightarrow I'(-2,8)$$

$$G(9,13) \rightarrow G'(13,9)$$

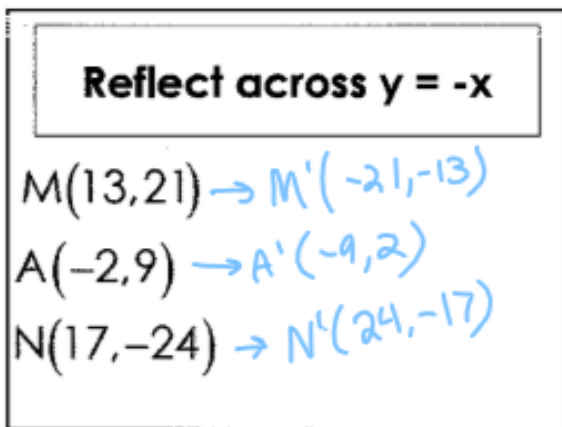
12



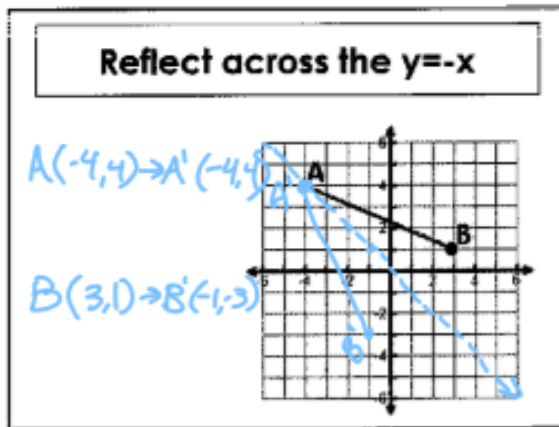
13



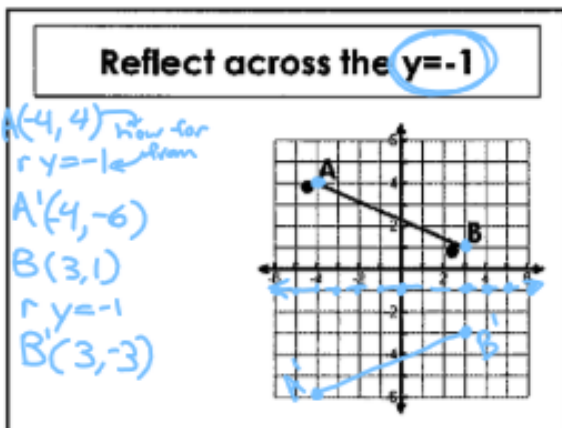
14



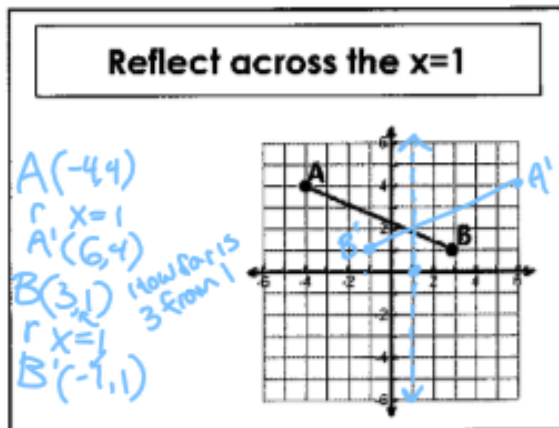
15



16



17



18

Reflections Practice

Date _____ Block _____

Find the coordinates of the vertices of each figure after the given transformation.

1) reflection across the y-axis

$P(-4, 2), X(-3, 5), W(0, 4), V(-2, 1)$

$P'(-4, 2) X'(3, 5) W'(0, 4) V'(2, 1)$

2) reflection across $y = -x$

$E(0, 0), F(-1, 4), G(1, 5), H(3, 4)$

$E'(0, 0) F'(-4, 1) G'(-5, -1) H'(-4, -3)$

3) reflection across $y = x$

$T(-4, 0), U(-1, 4), V(-1, 0)$

$T'(0, -4) U'(4, -1), V'(0, -1)$

4) reflection across the x-axis

$E(2, -1), F(1, 3), G(4, 1)$

$E'(2, 1) F'(1, -3) G'(4, -1)$

5) reflection across $y = 2$

$K(0, 1), L(0, 3), M(5, 2), N(4, 1)$

$K'(0, 3) L'(0, 1) M'(5, 2) N'(4, 3)$

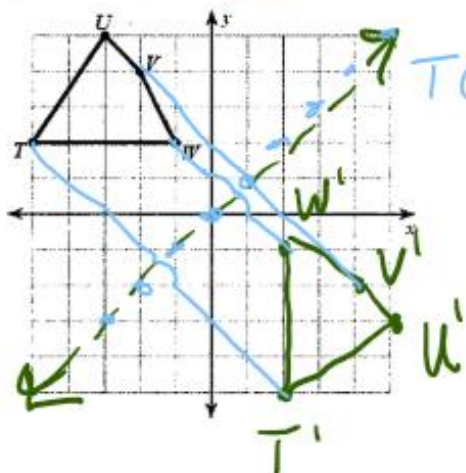
6) reflection across $x = -1$

$T(1, 2), U(1, 3), V(3, 3)$

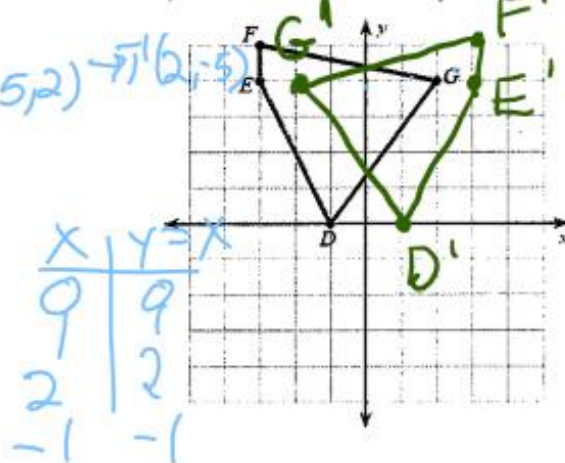
$T'(-3, 2) U'(-3, 3) V'(-5, 3)$

Graph the image of the figure using the transformation given.

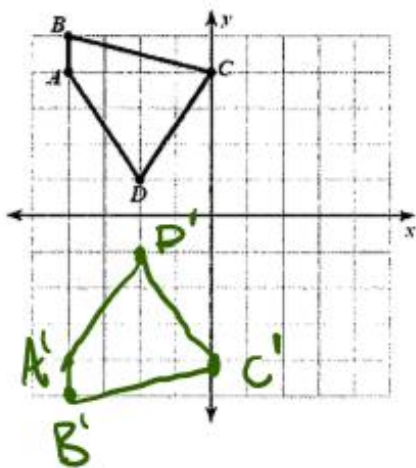
7) reflection across $y = x$



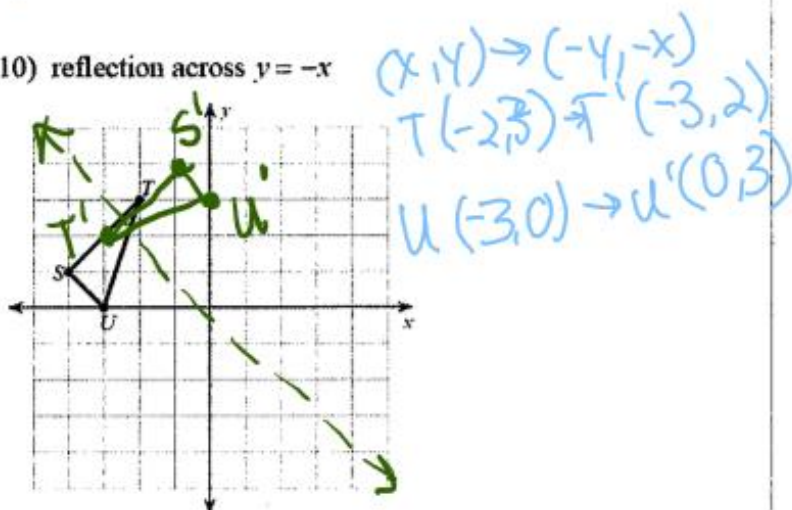
8) reflection across the y-axis



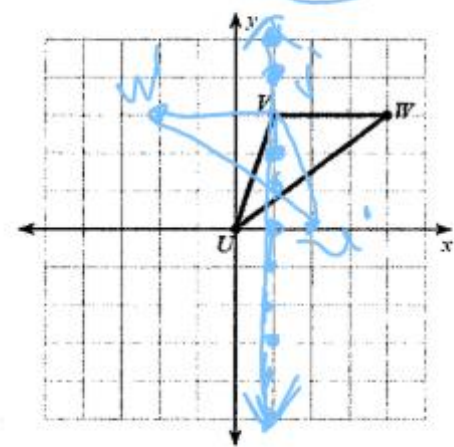
9) reflection across the x-axis



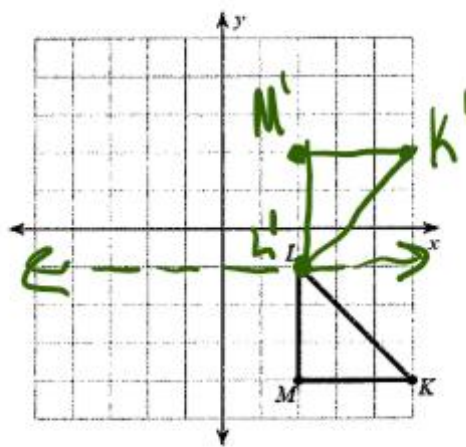
10) reflection across $y = -x$



11) reflection across $x = 1$

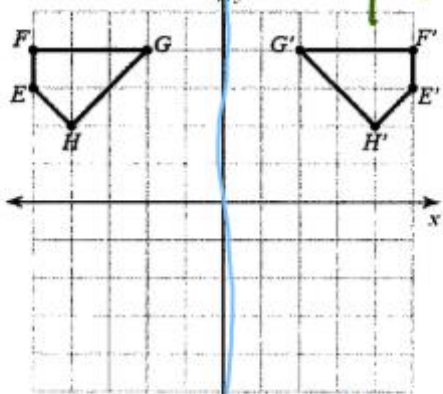


12) reflection across $y = -1$



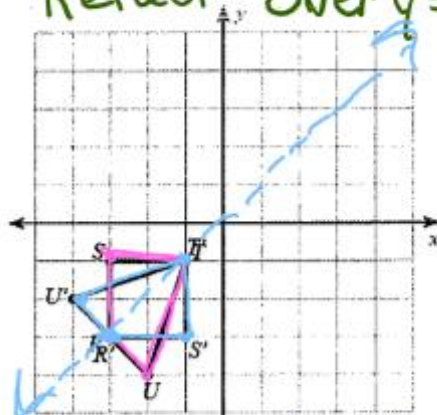
Write a rule to describe each transformation.

13) reflect over y -axis



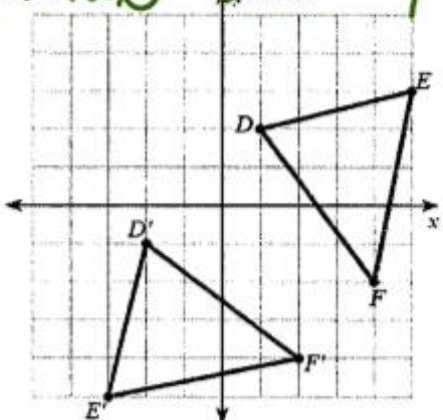
$$(x, y) \rightarrow (-x, y)$$

14) Reflect over $y = x$



$$(x, y) \rightarrow (y, x)$$

15) Reflect over $y = x$



$$(x, y) \rightarrow (-y, -x)$$

16) Reflect over $x = -1$

