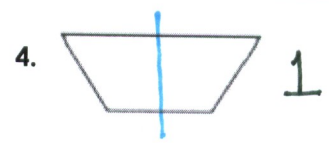
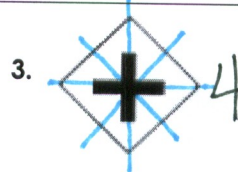
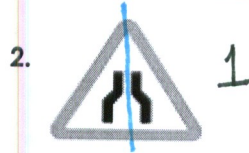


9-1 Reflections Practice

Name Master E
Date _____ Block _____

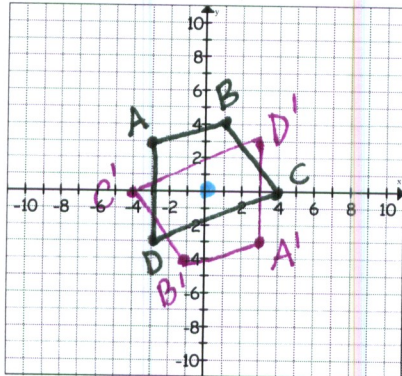
1-4: Determine how many lines of symmetry each sign or figure has.



5-10: Graph each figure and its image (in a colored pencil or pen) under the given reflection.

5. Reflect Quadrilateral ABCD in the origin.

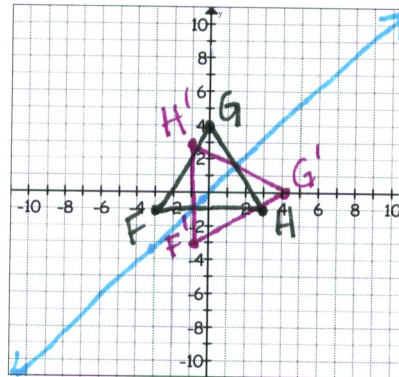
A(-3,3), B(1,4), C(4,0), and D(-3,-3)



$A'(3,-3)$
 $B'(-1,-4)$
 $C'(-4,0)$
 $D'(3,3)$

6. Reflect Triangle FGH in the line $y = x$.

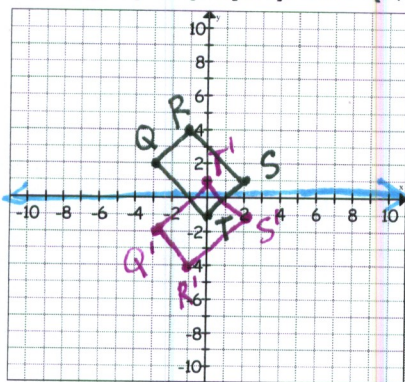
F(-3,-1), G(0,4), and H(3,-1)



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

7. Reflect Rectangle QRST in the x-axis.

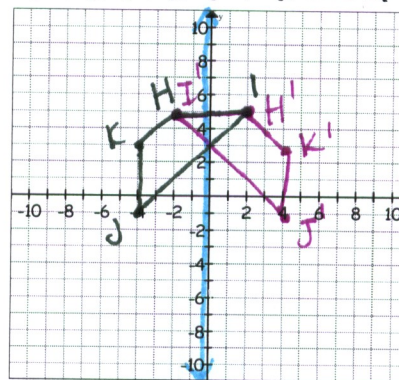
Q(-3,2), R(-1,4), S(2,1), and T(0,-1)



$Q'(-3,-2)$
 $R'(-1,-4)$
 $S'(2,-1)$
 $T'(0,1)$

8. Reflect Trapezoid HIJK in the y-axis.

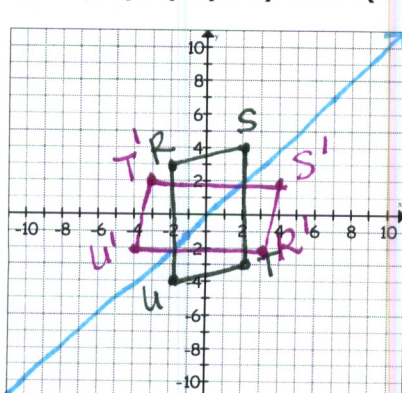
H(-2,5), I(2,5), J(-4,-1), and K(-4,3)



$H'(2,5)$
 $I'(-2,5)$
 $J'(4,-1)$
 $K'(4,3)$

9. Reflect \square RSTU in the line $y = x$.

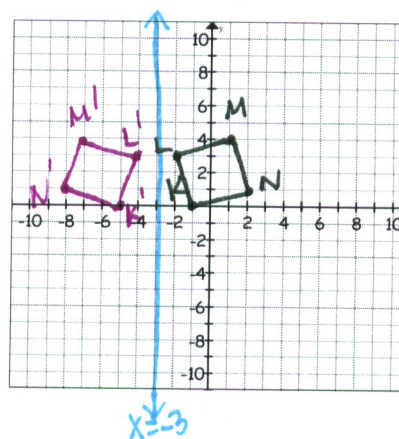
R(-2,3), S(2,4), T(2,-3), and U(-2,-4)



$R'(3,-2)$
 $S'(4,2)$
 $T'(-3,2)$
 $U'(-4,-2)$

10. Reflect Square KLMN in the line $x = -3$.

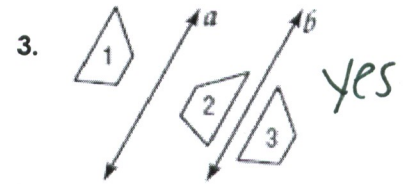
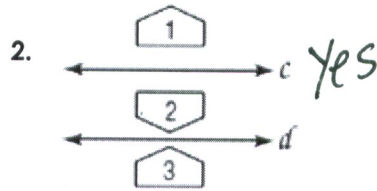
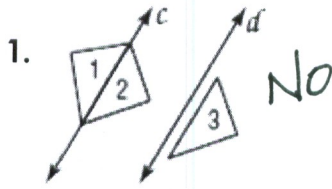
K(-1,0), L(-2,3), M(1,4), and N(2,1)



$K'(-5,0)$
 $L'(-4,3)$
 $M'(-7,4)$
 $N'(-8,1)$

9-2 Translations Practice

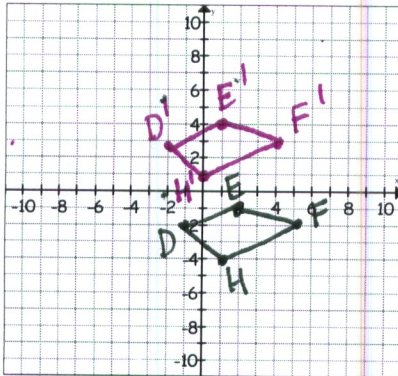
1-3: In each figure, $c \parallel d$. Determine if figure 3 is a translation image of figure 1. Write Yes or No.



4-7: Graph each figure and its image (in a colored pen or pencil) under the given translation.

4. Graph Quadrilateral DEFH under the translation $(x,y) \rightarrow (x-1, y+5)$

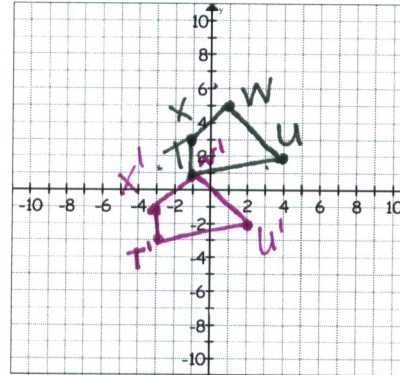
$D(-1, -2)$, $E(2, -1)$, $F(5, -2)$, and $H(1, -4)$



$D'(-2, 3)$
 $E'(1, 4)$
 $F'(4, 3)$
 $H'(0, 1)$

5. Graph Quadrilateral TUVX under the translation $(-2, -4)$

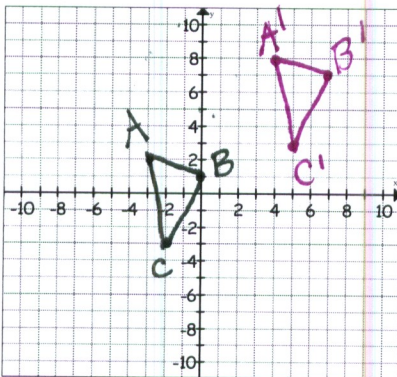
$T(-1, 1)$, $U(4, 2)$, $W(1, 5)$, and $X(-1, 3)$



$T'(-3, -3)$
 $U'(2, -2)$
 $W'(-1, 1)$
 $X'(-3, -1)$

6. Graph Triangle ABC under the translation $(7, 6)$.

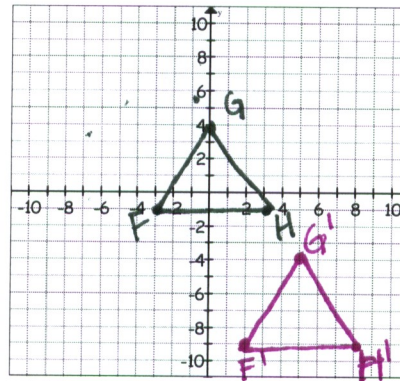
$A(-3, 2)$, $B(0, 1)$ and $C(-2, -3)$



$A'(4, 8)$
 $B'(7, 7)$
 $C'(5, 3)$

7. Graph Triangle FGH under the translation $(x,y) \rightarrow (x+5, y-8)$

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



$F'(2, -9)$
 $G'(5, -4)$
 $H'(8, -9)$

8-12: Describe the translation from one figure to the next in both vector and function notation.

- | | Vector Notation: | Function Notation: |
|-------------------------------------|--------------------------|--------------------------------|
| 8. Figure 4 \rightarrow Figure 1 | $\langle -3, -6 \rangle$ | $(x,y) \rightarrow (x-3, y-6)$ |
| 9. Figure 3 \rightarrow Figure 1 | $\langle 0, -3 \rangle$ | $(x,y) \rightarrow (x, y-3)$ |
| 10. Figure 3 \rightarrow Figure 2 | $\langle 4, -1 \rangle$ | $(x,y) \rightarrow (x+4, y-1)$ |
| 11. Figure 4 \rightarrow Figure 2 | $\langle 1, -4 \rangle$ | $(x,y) \rightarrow (x+1, y-4)$ |
| 12. Figure 2 \rightarrow Figure 3 | $\langle -4, 1 \rangle$ | $(x,y) \rightarrow (x-4, y+1)$ |

