

Unit 1 Test Study Guide

(Transformations)
and Transversals

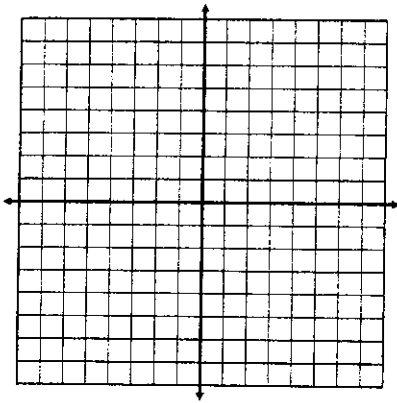
Name: _____

Date: _____ Block: _____

Topic 1: Reflections

Directions: Graph and label each figure and its image under the given reflection.

1. Triangle FGH with vertices $F(-7, -2)$, $G(-1, -4)$ and $H(-5, -5)$: in the y -axis

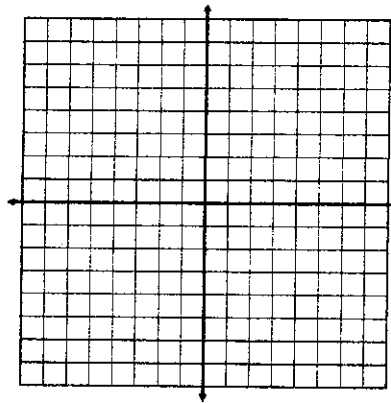


F' (____, ____)

G' (____, ____)

H' (____, ____)

2. Trapezoid $QRST$ with vertices $Q(4, -1)$, $R(6, -1)$, $S(8, -6)$ and $T(2, -6)$: in the line $y = x$



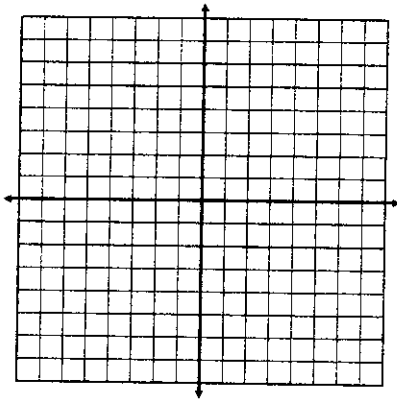
Q' (____, ____)

R' (____, ____)

S' (____, ____)

T' (____, ____)

3. Square $LMNO$ with vertices $L(-4, 6)$, $M(-1, 8)$, $N(1, 5)$, and $O(-2, 3)$: in the line $y = 2$



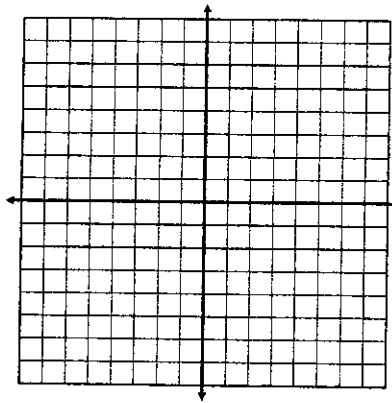
L' (____, ____)

M' (____, ____)

N' (____, ____)

O' (____, ____)

4. Rhombus $ABCD$ with vertices $A(-3, -2)$, $B(1, -3)$, $C(2, -7)$ and $D(-2, -6)$: in the x -axis



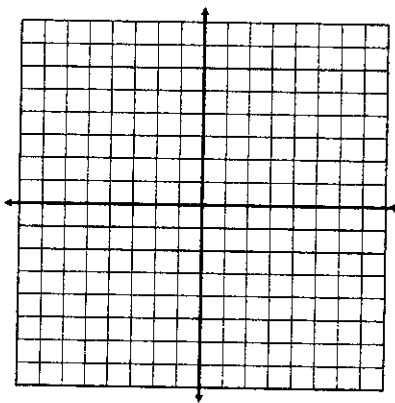
A' (____, ____)

B' (____, ____)

C' (____, ____)

D' (____, ____)

5. Parallelogram $STUV$ with vertices $S(-3, 4)$, $T(-1, 7)$, $U(5, 7)$, and $V(3, 4)$: in the line $y = -x$



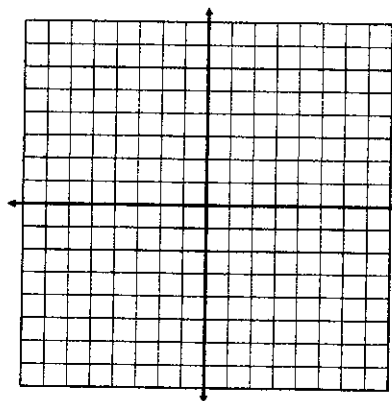
S' (____, ____)

T' (____, ____)

U' (____, ____)

V' (____, ____)

6. Triangle XYZ with vertices $X(-8, 3)$, $Y(-6, 5)$, and $Z(-5, -2)$: in the line $x = -4$



X' (____, ____)

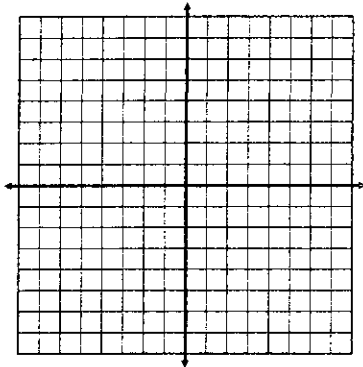
Y' (____, ____)

Z' (____, ____)

Topic 2: Translations

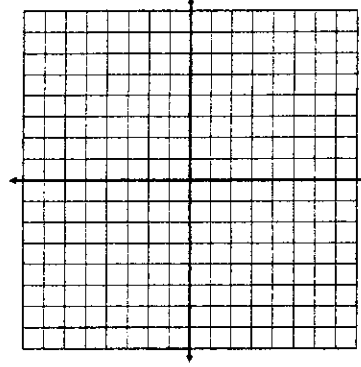
Directions: Graph and label each figure and its image under the given translation.

7. Rectangle $DEFG$ with vertices $D(6, 1)$, $E(8, 0)$, $F(5, -6)$, and $G(3, -5)$: $(x, y) \rightarrow (x - 11, y + 4)$



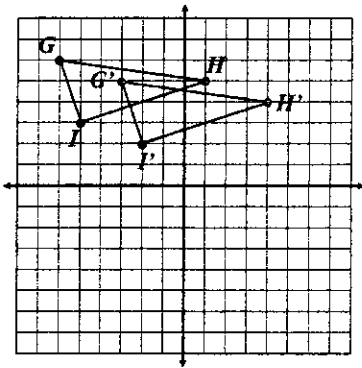
D' (____, ____)
 E' (____, ____)
 F' (____, ____)
 G' (____, ____)

8. Triangle JKL with vertices $J(-2, 3)$, $K(2, 4)$, and $L(6, -1)$: $(x, y) \rightarrow (x - 2, y - 6)$



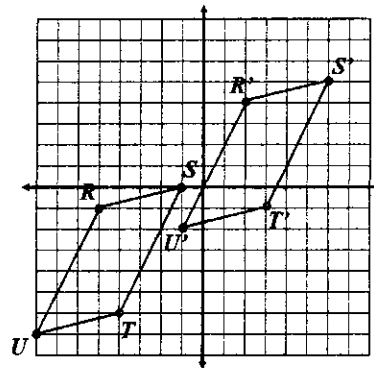
J' (____, ____)
 K' (____, ____)
 L' (____, ____)

9. Write a rule for the translation shown below:



Rule: _____

10. Write a rule for the translation shown below:



Rule: _____

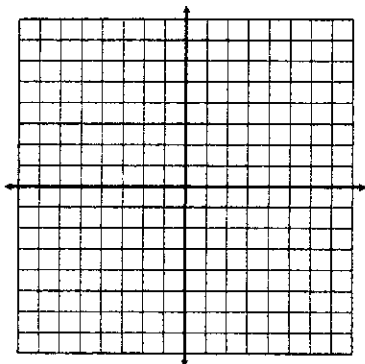
Topic 3: Rotations

Give each rule for counterclockwise rotations about the origin:

90° : $(x, y) \rightarrow$ _____ 180° : $(x, y) \rightarrow$ _____ 270° : $(x, y) \rightarrow$ _____

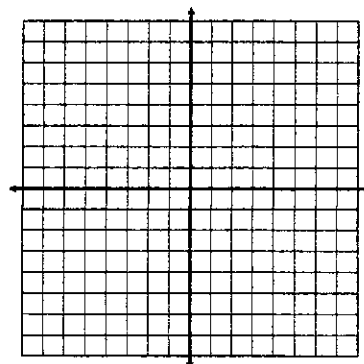
Directions: Graph and label each figure and its image under the given counterclockwise rotation about the origin.

11. Triangle CDE with vertices $C(2, 4)$, $D(6, 7)$, and $E(7, 3)$: 90°



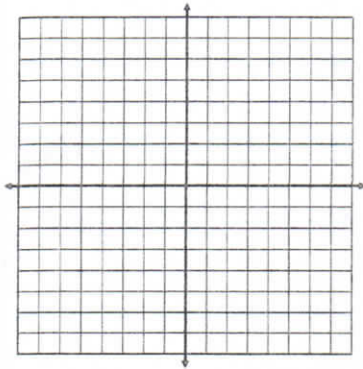
C' (____, ____)
 D' (____, ____)
 E' (____, ____)

12. Quadrilateral $MNOP$ with vertices $M(-6, 8)$, $N(-1, 4)$, $O(-2, 1)$, and $Z(-7, 2)$: 180°



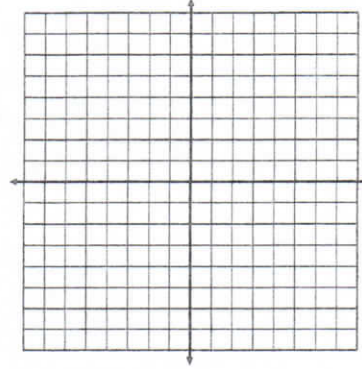
M' (____, ____)
 N' (____, ____)
 O' (____, ____)
 P' (____, ____)

13. Square $TUVW$ with vertices $T(-6, -2)$, $U(-3, -3)$, $V(-4, -6)$, and $W(-7, -5)$: 270°



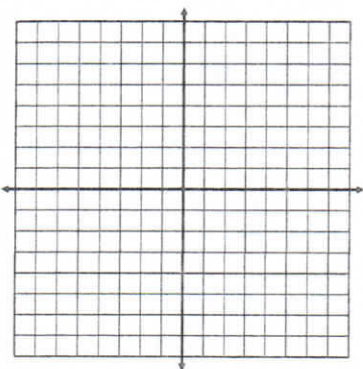
T' (____, ____)
 U' (____, ____)
 V' (____, ____)
 W' (____, ____)

14. Trapezoid $KLMN$ with vertices $K(-7, 1)$, $L(-3, 0)$, $M(-3, -4)$, and $N(-7, -8)$: 180°



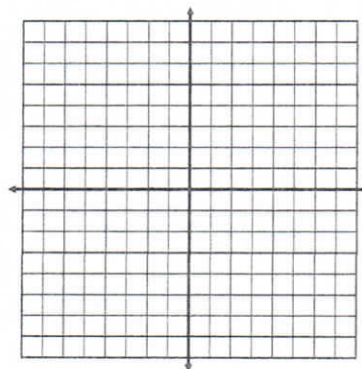
K' (____, ____)
 L' (____, ____)
 M' (____, ____)
 N' (____, ____)

15. Rhombus $DEFG$ with vertices $D(-7, 8)$, $E(-2, 7)$, $F(-1, 2)$, and $G(-6, 3)$: 90°



D' (____, ____)
 E' (____, ____)
 F' (____, ____)
 G' (____, ____)

16. Triangle PQR with vertices $P(1, 3)$, $Q(4, 8)$, and $R(8, 1)$: 270°

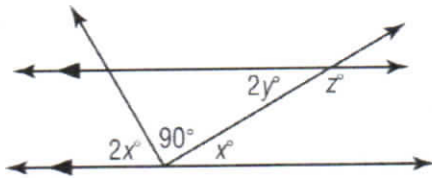


P' (____, ____)
 Q' (____, ____)
 R' (____, ____)

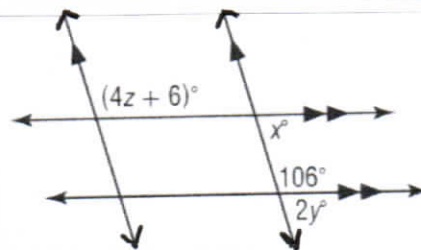
Topic 4: Parallel lines cut by a transversal

Directions: For problems #17-21 solve for the missing variable(s).

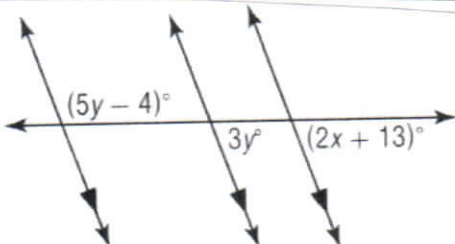
17.



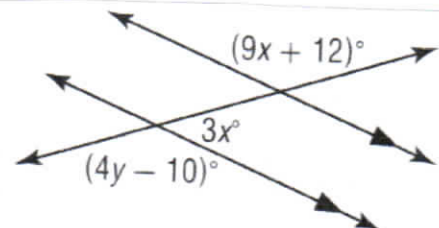
18.



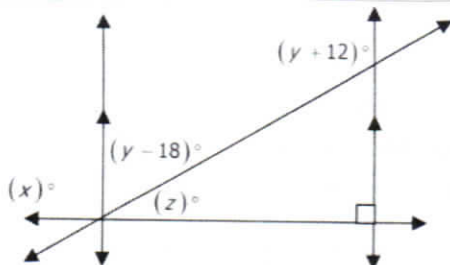
19.



20.



21.



22.

In figure below $a \parallel b$, $m\angle 1 = 78^\circ$, and $m\angle 2 = 47^\circ$. Find measure of each angle.

