Name _____ Class _____ Date _____

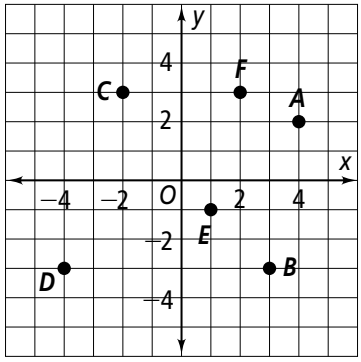
Practice

Form K

Reflections

Find the coordinates of each image.

1. $R_{x\text{-axis}}(A)$
2. $R_{y\text{-axis}}(B)$
3. $R_{y=1}(C)$
4. $R_{x=-1}(D)$
5. $R_{y=-3}(E)$
6. $R_{x=-2}(F)$



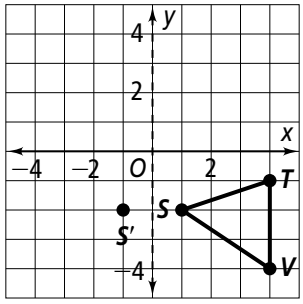
Coordinate Geometry **Given points $S(1, -2)$, $T(4, -1)$, and $V(4, -4)$, graph $\triangle STV$ and its reflection image as indicated.**

7. $R_{y\text{-axis}}$

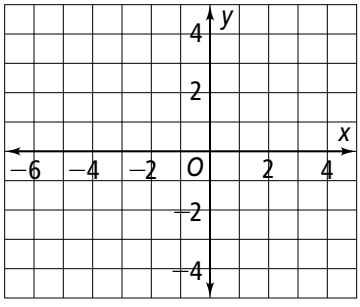
   To start, draw the triangle and show the y-axis as the dashed line of refection.

   Then locate S' so that the y-axis is the perpendicular bisector of $\overline{SS'}$.

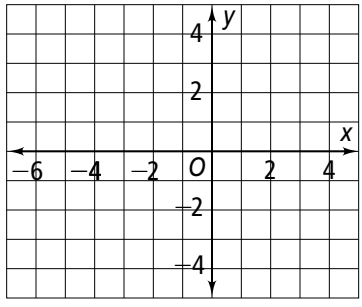
   Repeat to find T' and V'.



8. $R_{x\text{-axis}}$

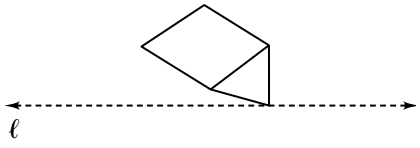


9. $R_{x=-1}$

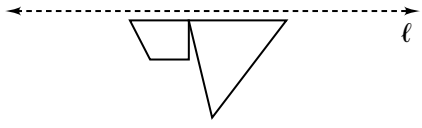


Copy each figure and line ℓ. Draw each figure's reflection image across line ℓ.

10.



11.



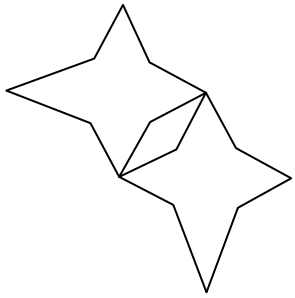
Name _____ Class _____ Date _____

Practice (continued) *Form K*

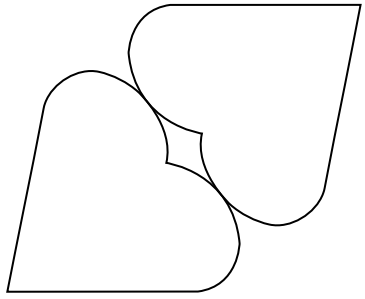
Reflections

Copy each pair of figures. Then draw the line of reflection you can use to map one figure onto the other.

12.



13.



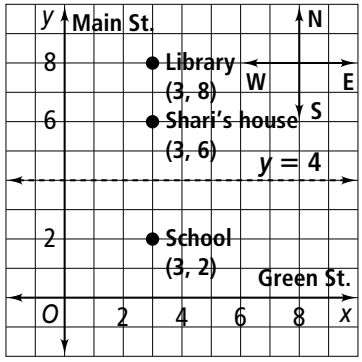
Use the figure at the right to help you solve Exercises 14 and 15.

14. Shari wants to start at school, walk to Main St., then continue on to her house. She wants the whole trip to be the shortest distance possible. To which point on Main St. should she walk?

To start, draw a line of reflection $y = 4$.

Where does the line of reflection intersect Main St.?

On the graph, draw the shortest route from school to Main St. to Shari's house.



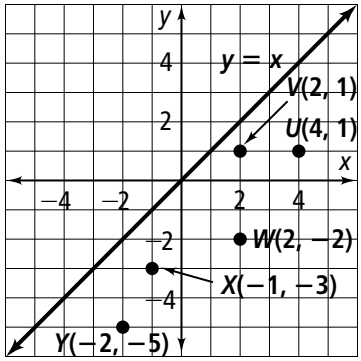
15. Shari decides instead to walk to the library. She wants to walk the shortest possible total distance, starting from school, walking to Main St., and then to the library. On the graph, draw a line of reflection to help you find the shortest path. Then draw the path she should take to the library.

For Exercises 16–20, find the coordinates of each image.

16. $R_{y=x}(U)$

To start, draw line ℓ_1 through U perpendicular to $y = x$. The slope of $y = x$ is ___?___, so the slope of line ℓ_1 is ___?___.

What are the coordinates of U' so that $\overline{UU'}$ is bisected by $y = x$?



17. $R_{y=x}(V)$

18. $R_{y=x}(W)$

19. $R_{y=x}(X)$

20. $R_{y=x}(Y)$