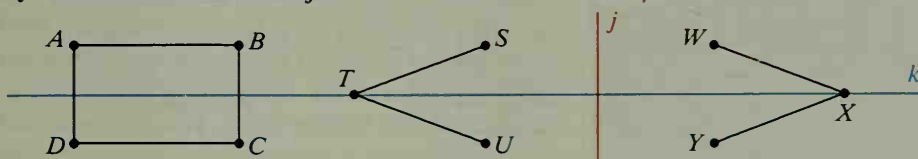


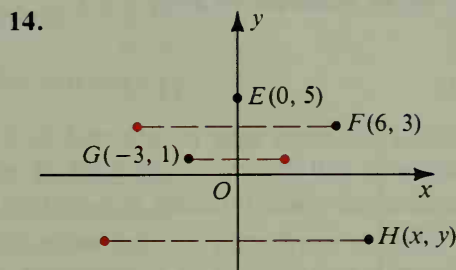
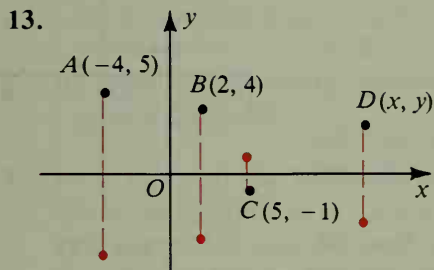
Classroom Exercises

Complete the following. Assume points D , C , U , W , X , and Y are obtained by reflection in line k or j .

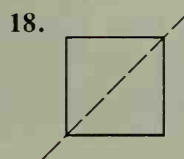
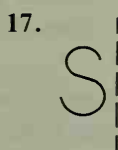
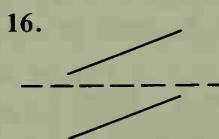
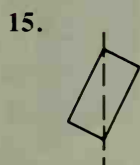


1. R_k stands for $\underline{\hspace{1cm}}$.
2. $R_k: A \rightarrow \underline{\hspace{1cm}}$
3. $R_k(B) = \underline{\hspace{1cm}}$
4. $R_k: \overline{AB} \rightarrow \underline{\hspace{1cm}}$
5. $R_k(C) = \underline{\hspace{1cm}}$
6. $R_k: T \rightarrow \underline{\hspace{1cm}}$
7. $R_k: \overline{BC} \rightarrow \underline{\hspace{1cm}}$
8. $R_k: \angle STU \rightarrow \underline{\hspace{1cm}}$
9. $R_j(S) = \underline{\hspace{1cm}}$
10. $R_j: \overline{ST} \rightarrow \underline{\hspace{1cm}}$
11. $R_j(\underline{\hspace{1cm}}) = \overline{XY}$
12. $R_j: \text{line } k \rightarrow \underline{\hspace{1cm}}$

Points A – D are reflected in the x -axis. Points E – H are reflected in the y -axis. State the coordinates of the images.



Sketch each figure on the chalkboard. With a different color, sketch its image, using the dashed line as the line of reflection.



19. Under a reflection, is an angle always mapped to a congruent angle? Is a polygon always mapped to a polygon with the same area? Explain.
20. Explain in your own words the meaning of each phrase.
 - a. An isometry preserves distance.
 - b. Area is invariant under a reflection.
 - c. Orientation is not invariant under a reflection.