HW 9.1

online

p607-608 #1-26

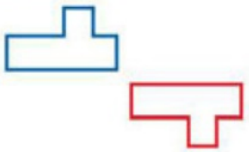
1. **Vocabulary** If a transformation is an *isometry*, how would you describe the relationship between the preimage and the image?

Tell whether each transformation appears to be a reflection.

2. 

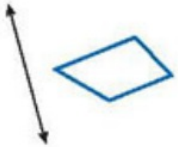
3. 

4. 

5. 

Multi-Step Copy each figure and the line of reflection. Draw the reflection of the figure across the line.

6. 

7. 

8. **City Planning** The towns of San Pablo and Tanner are located on the same side of Highway 105. Two access roads are planned that connect the towns to a point P on the highway. Draw a diagram that shows where point P should be located in order to make the total length of the access roads as short as possible.

Reflect the figure with the given vertices across the given line.

9. $A(-2, 1), B(2, 3), C(5, 2)$; x-axis
10. $R(0, -1), S(2, 2), T(3, 0)$; y-axis
11. $M(2, 1), N(3, 1), P(2, -1), Q(1, -1)$; $y = x$
12. $A(-2, 2), B(-1, 3), C(1, 2), D(-2, -2)$; $y = x$

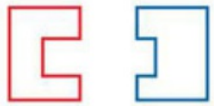
PRACTICE AND PROBLEM SOLVING

Tell whether each transformation appears to be a reflection.

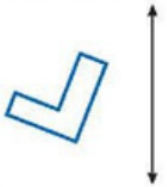
13. 

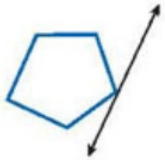
14. 

15. 

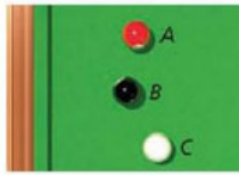
16. 

Multi-Step Copy each figure and the line of reflection. Draw the reflection of the figure across the line.

17. 

18. 

19. **Recreation** Cara is playing pool. She wants to hit the ball at point A without hitting the ball at point B. She has to bounce the cue ball, located at point C, off the side rail and into her ball. Draw a diagram that shows the exact point along the rail that Cara should aim for.



Reflect the figure with the given vertices across the given line.

20. $A(-3, 2), B(0, 2), C(-2, 0)$; y-axis
21. $M(-4, -1), N(-1, -1), P(-2, -2)$; $y = x$
22. $J(1, 2), K(-2, -1), L(3, -1)$; x-axis
23. $S(-1, 1), T(1, 4), U(3, 2), V(1, -3)$; $y = x$

Copy each figure. Then complete the figure by drawing the reflection image across the line.

24. 

25. 

26.