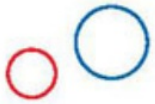
HW 9.7a Online

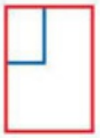
pg. 653 #1-16, 20-23

GUIDED PRACTICE

1. **Vocabulary** What are the *center of dilation* and scale factor for the transformation $(x, y) \rightarrow (3x, 3y)$?

Tell whether each transformation appears to be a dilation.

2. 

3. 

4. 

5. 

Copy each triangle and center of dilation P. Draw the image of the triangle under a dilation with the given scale factor.

6. Scale factor: 2

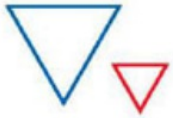
7. Scale factor: $\frac{1}{2}$

Draw the image of the figure with the given vertices under a dilation with the given scale factor centered at the origin.

9. $A(1, 0)$, $B(2, 2)$, $C(4, 0)$; scale factor: 2
10. $J(-2, 2)$, $K(4, 2)$, $L(4, -2)$, $M(-2, -2)$; scale factor: $\frac{1}{2}$
11. $D(-3, 3)$, $E(3, 6)$, $F(3, 0)$; scale factor: $-\frac{1}{3}$
12. $P(-2, 0)$, $Q(-1, 0)$, $R(0, -1)$, $S(-3, -1)$; scale factor: -2

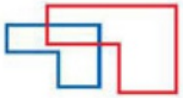
PRACTICE AND PROBLEM SOLVING

Tell whether each transformation appears to be a dilation.

13. 

14. 

15. 

16. 

Draw the image of the figure with the given vertices under a dilation with the given scale factor centered at the origin.

20. $M(0, 3)$, $N(6, 0)$, $P(0, -3)$; scale factor: $-\frac{1}{3}$
21. $A(-1, 3)$, $B(1, 1)$, $C(-4, 1)$; scale factor: -1
22. $R(1, 0)$, $S(2, 0)$, $T(2, -2)$, $U(-1, -2)$; scale factor: -2
23. $D(4, 0)$, $E(2, -4)$, $F(-2, -4)$, $G(-4, 0)$, $H(-2, 4)$, $J(2, 4)$; scale factor: $-\frac{1}{2}$