

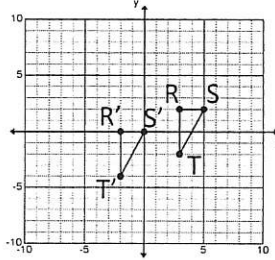
# Chapter 9 Practice Test

Key

Name \_\_\_\_\_

Hour \_\_\_\_\_ Score \_\_\_\_\_

1.  $\Delta R'S'T'$  is a translation image of  $\Delta RST$ .  
What is a rule for the translation?



1.  $T_{\langle -5, 2 \rangle} (\Delta RST)$

2. Point  $R(x, y)$  moves 5 units left and 10 units up. What is a rule that describes this translation?

2.  $T_{\langle -5, 10 \rangle} (R)$

3. Is a rotation a rigid motion? Explain.

3. Yes. Side lengths & angle measures are preserved

Find the coordinates of the vertices of each image.

4.  $R_{x=-1}(QRST)$

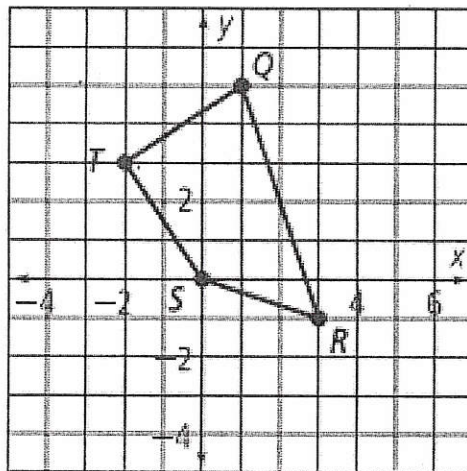
4.  $Q'(-3, 5) R'(-5, -1)$   
 $S'(-2, 0) T'(0, 3)$

5.  $r_{(270^\circ, 0)}(QRST)$

5.  $Q'(5, -1) R'(-1, -3)$   
 $S'(0, 0) T'(3, 2)$

6.  $T_{\langle 2, 5 \rangle}(QRST)$

6.  $Q'(3, 10) R'(5, 4)$   
 $S'(2, 5) T'(0, 8)$

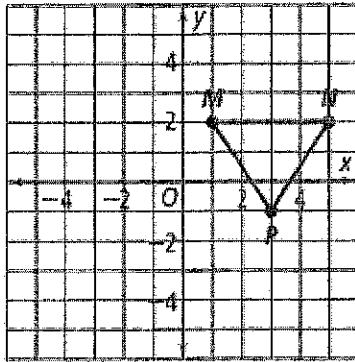


7.  $(R_{x\text{-axis}} \circ T_{\langle 0, -2 \rangle})(QRST)$

7.  $Q'(1, -3) R'(3, 3)$   
 $S'(0, 2) T'(-2, -1)$

Write a single transformation rule that has the same effect as each composition of transformations.

8.  $T_{\langle -4, 7 \rangle} \circ T_{\langle 3, 0 \rangle}$



8.  $T_{\langle -1, 7 \rangle}(x, y)$

9.  $R_{x=5} \circ R_{x=2}$

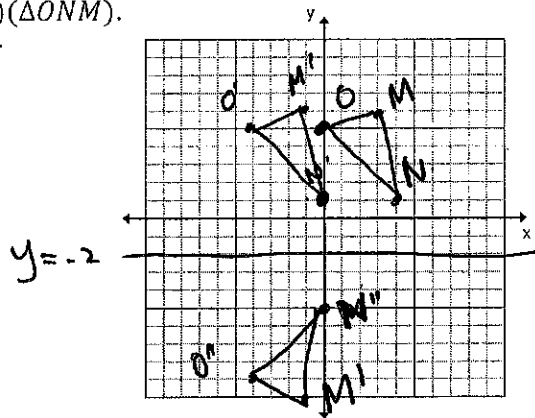
9.  $T_{\langle 6, 0 \rangle}(x, y)$

10.  $R_{y=3} \circ T_{\langle 0, 2 \rangle}$

10.  $R_{y=2}(x, y)$

11.  $\triangle ONM$  has vertices  $O(0, 5)$ ,  $N(4, 1)$  and  $M(3, 6)$ . What are the coordinates of the vertices of  $(R_{y=-2} \circ T_{\langle -4, 0 \rangle})(\triangle ONM)$ .

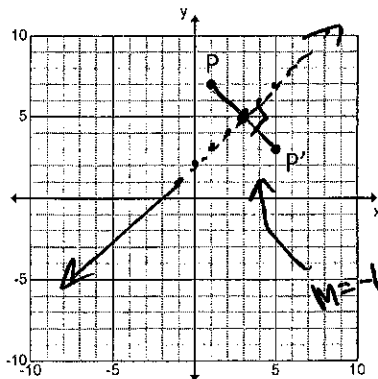
2nd 1st



11.  $O''(-4, -9)$   
 $N''(0, -5)$   
 $M''(-1, -10)$

12. Draw the line that reflects P onto P'. Write the equation of the reflection line.

12.  $y = x + 2$

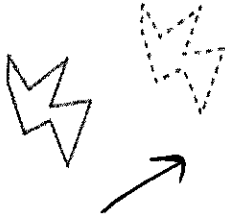


Midpt  $P(1, 7)$   $P'(5, 3)$   
 $(\frac{1+5}{2}, \frac{7+3}{2})$   
 $(\frac{6}{2}, \frac{10}{2})$   
 $(3, 5)$

$\perp$  slope = +1

Identify the rigid motion that maps the solid-line figure onto the dotted-line figure.

13.



14.

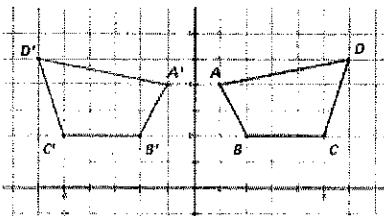


13. Translation

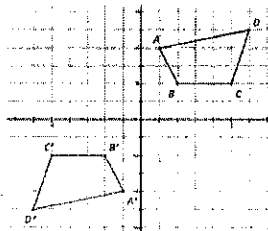
14. Reflection

Write the transformation that maps one figure to the other.

15.



16.

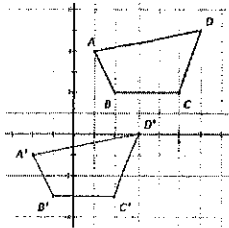


15. Reflection

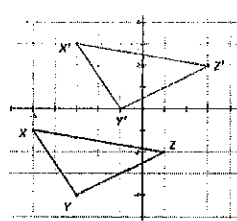
16. Rotation

Write the transformation that maps one figure to the other.

17.



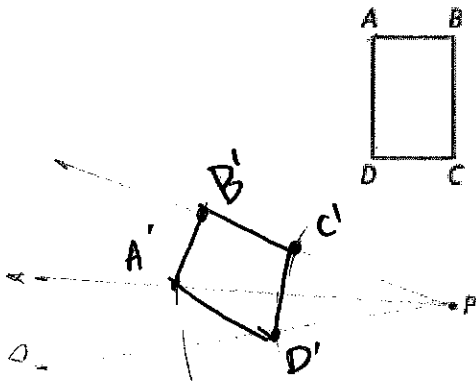
18.



17. Translation

18. Translation

19. Draw  $r_{(70^\circ, P)}(ABCD)$



20. Draw  $r_{(110^\circ, P)}(\Delta LMP)$

