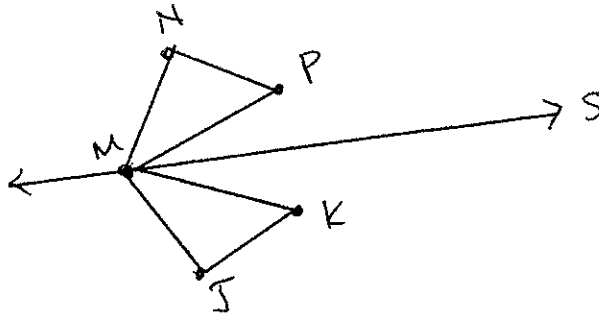
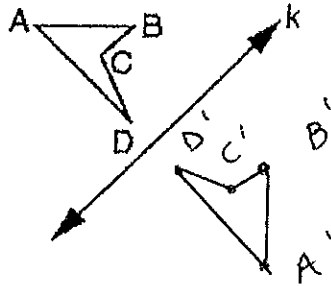


### Unit D Exam Review

1. In the space below, draw and label a figure so that  $r_s(\triangle MNP) = (\triangle MJK)$ .



2. In the figure below, draw the reflection image of  $ABCD$  over line  $k$ .



3. Give the image of  $(r, s)$  when translated by the vector  $(8, -7)$ .   
  $\rightarrow$  add!

3.  $(r+8, s-7)$

4.  $\triangle RNT$  has vertices  $R = (5, 9)$ ,  $N = (4, -8)$ , and  $T = (-7, 8)$ . Give the vertices of the reflection image of  $\triangle RNT$  over the y-axis.

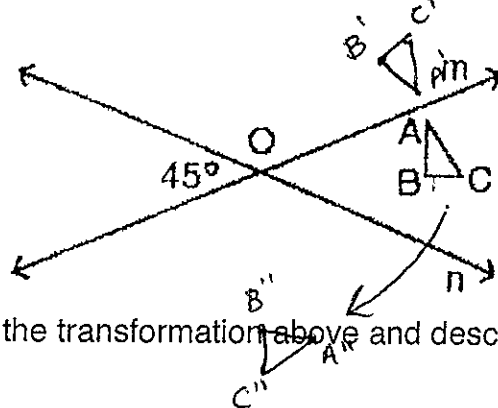
change x value to its opposite!

4.  $R' = (-5, 9)$   
 $N' = (-4, -8)$   
 $T' = (7, 8)$

5. True or False. Translations preserve collinearity.

5. TRUE

6. a. Use the figure below. Draw  $r_{m \circ r_n}(\triangle ABC)$ .   
  $\rightarrow$  A, B, C, D & O



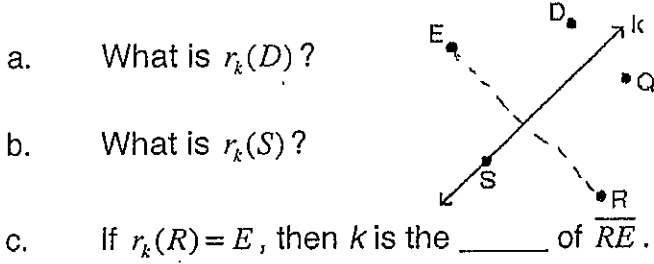
\* MIRA on m first!

- b. Name the transformation above and describe its direction & magnitude.

Rotation, Clockwise,  $90^\circ$    
  $\rightarrow 45 \times 2$

7. To rotate MN by  $150^\circ$  about point R, you can reflect it across two lines that form an angle of  $75^\circ$  and whose vertex is R.

8. Use the figure below, where  $k$  is a line of reflection.



a. What is  $r_k(D)$ ?

8a. Q

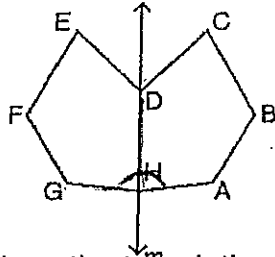
b. What is  $r_k(S)$ ?

b. S

c. If  $r_k(R) = E$ , then  $k$  is the \_\_\_\_\_ of  $\overline{RE}$ .

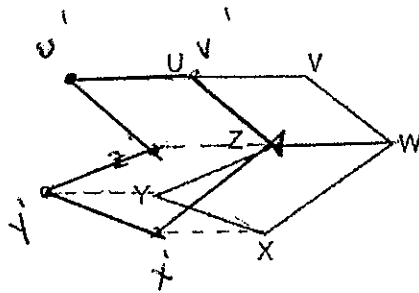
c.  $\perp$  bisector

9. In the figure below,  $r_m(G) = A$ . If  $m\angle GHA = 156^\circ$ , find  $m\angle GHD$ .



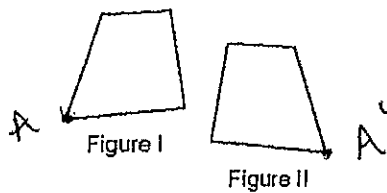
9.  $78^\circ$

10. In the figure, draw the translation image of UVWXYZ determined by  $\vec{WZ}$ .



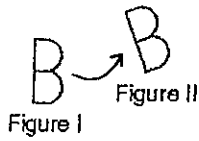
11. Name the type of isometry that maps Figure I onto Figure II.

11. Glide Reflection



12. Name the type of isometry that maps Figure I onto Figure II.

12. Rotation



"turn"

13. Multiple Choice. Which is a pair of <sup>same</sup> congruent letters?

13. C

A) **F** **J**      B) **M** **3**      C) **Z** **S**      D) **I** **I**

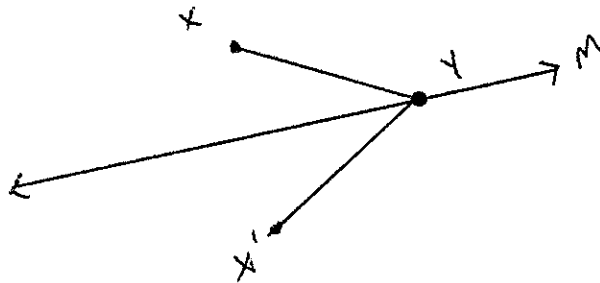
14. Name the four types of isometries.

- (1) Reflection                      (2) Translation  
 (3) Rotation                        (4) Glide Reflection

15. Name the isometries that preserve orientation.

Rotation and Translation

16. In the space below, draw and label a figure so that  $r_m(\overline{XY}) = \overline{X'Y'}$ .



17. Give the coordinates of P when...

a.  $P = r_{y\text{-axis}}(-26, 42)$       17a. (26, 42)  
 ← x value becomes opposite

b. P is the image of (-19, -18) when translated by the vector (20, 18).      b. (1, 0)

add -19 & 20

add -18 & 18