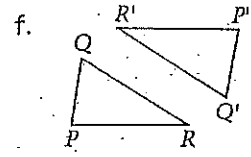
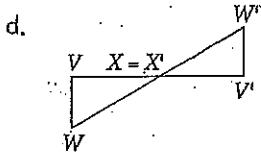
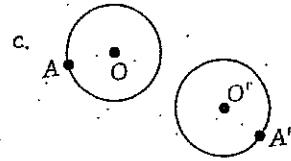
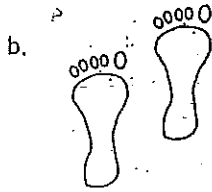
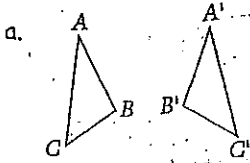
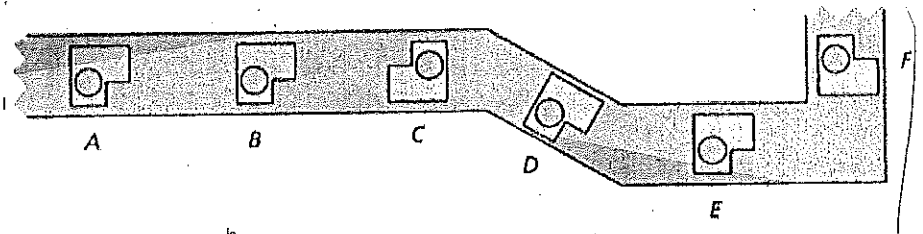


1. The figures below are congruent to each other. Decide which transformation as used in each case.



2. Use the top view of a conveyor belt in an assembly line to name the transformation.

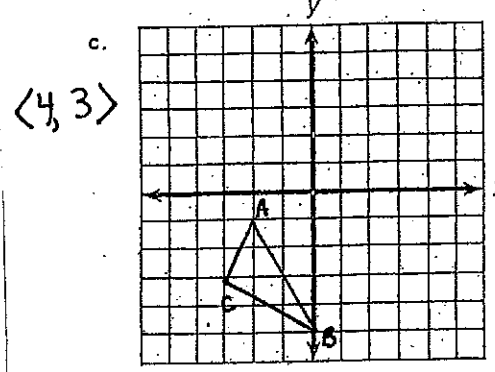
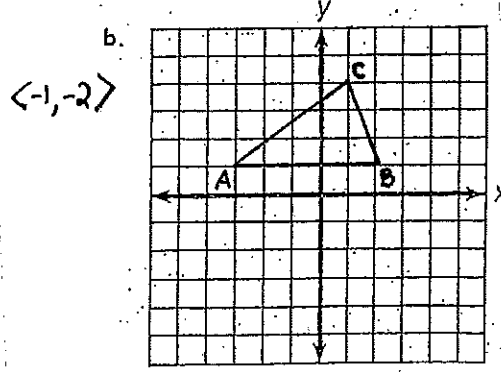
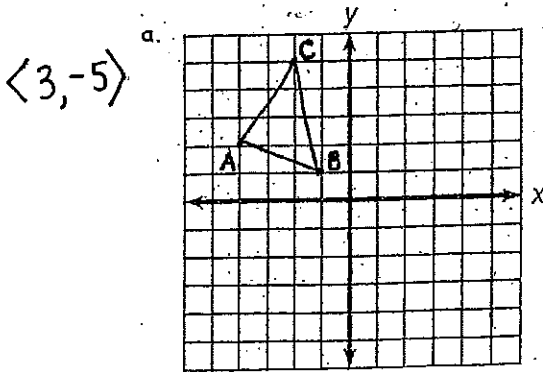
- a. A is mapped to B.
- b. C is mapped to D.
- c. B is mapped to C.
- d. B is mapped to E.
- e. A is mapped to C.
- f. C is mapped to F.



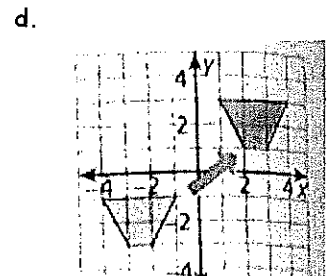
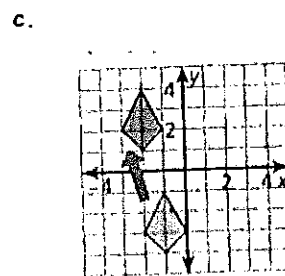
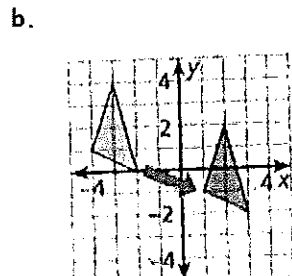
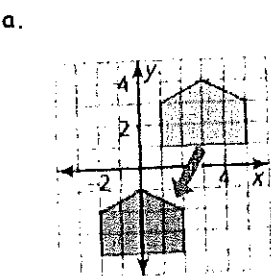
3. Write the geometric term that is a synonym for each:

- a. flip
- b. spin
- c. mirror
- d. slide
- e. move
- f. turn

4. Translate  $\triangle ABC$  according to the given vector. Label the new triangle  $\triangle A'B'C'$

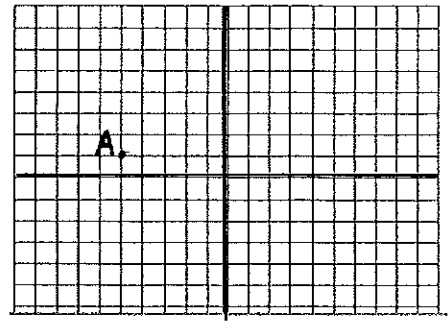


5. A translation has taken place. Give the vector which expresses the move.



6. Use the path below to follow A to A". What single translation would accomplish the same action?

- $(x, y) \rightarrow (x + 5, y + 3)$   
 followed by  
 $(x, y) \rightarrow (x + 2, y - 4)$   
 followed by  
 $(x, y) \rightarrow (x - 3, y - 3)$ ?



7. A graphic designer is creating the following logos. Which transformation would help her produce each image?

a. Girl Scouts

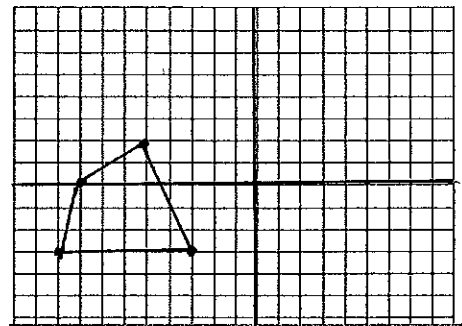
b. Transportation

c. Boy Scouts

d. Treasury



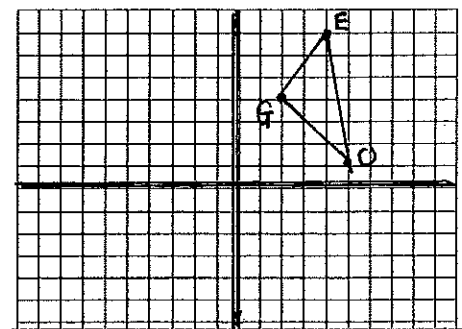
8. Make the shape illustrate a translation of  $(x, y) \rightarrow (x - 5, y)$



9. Using the diagram at right, find the coordinates for the image of  $\triangle GEO$  after the translation:

$$(x, y) \rightarrow (x + 4, y - 2).$$

G'(\_\_\_\_\_) E'(\_\_\_\_\_) O'(\_\_\_\_\_)



10. True or False? Making a sketch of situation may help you answer.

a. If  $\overline{MA}$  is a translation of  $\overline{TH}$ , then  $\overline{MA}$  is parallel to  $\overline{TH}$ .

b. If  $\overline{MA}$  is a perpendicular to  $\overline{TH}$ , then  $\overline{MA}$  is not a translation of  $\overline{TH}$ .

c. If  $\triangle ABC$  is a translation of  $\triangle DEF$ , then  $AD = BE = CF$ .

d. If  $\triangle ABC$  is a translation of  $\triangle DEF$ , and  $\triangle DEF$  is a translation of  $\triangle GHI$ , then  $\triangle ABC$  is a translation of  $\triangle GHI$ .