

# Reteaching 10-5

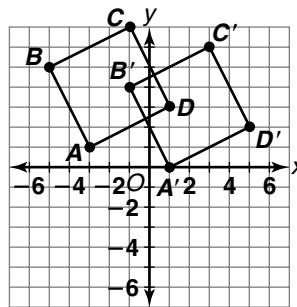
## Translations

Movements of figures on a plane are called **transformations**. A translation, or slide, moves all points the same distance and direction.

The translation  $(x, y) \rightarrow (x + 4, y - 1)$  moves *each* point to the right 4 units and down 1 unit.

$A(-3, 1)$  moves to  $(-3 + 4, 1 - 1)$ , where point  $A'(1, 0)$  is its **image**.

The square  $ABCD$  moves to its image square  $A'B'C'D'$ .

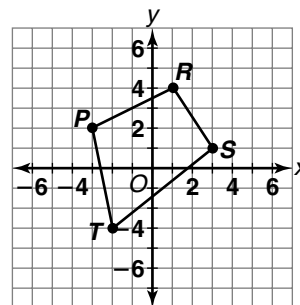
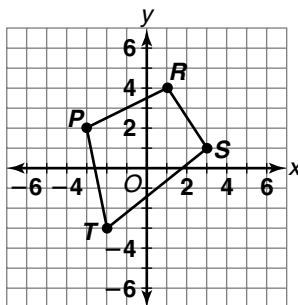
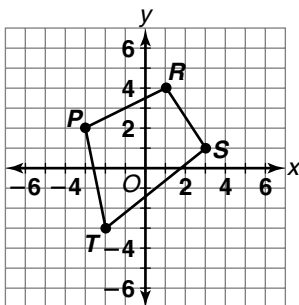


Complete the following for the figure above.

1.  $B(-5, 5) \rightarrow B'(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$
2.  $C(-1, 7) \rightarrow C'(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$
3.  $D(\underline{\hspace{1cm}}, \underline{\hspace{1cm}}) \rightarrow D'(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$

Graph each translation of figure  $PRST$ .

4. right 2 units
5. left 2 units, down 2 units
6. right 1 unit, up 3 units



Complete the rule for each translation.

7. right 3 units, up 1 unit  
 $(x, y) \rightarrow \underline{\hspace{2cm}}$
8. left 4 units, up 5 units  
 $(x, y) \rightarrow \underline{\hspace{2cm}}$
9. left 1 unit, down 9 units  
 $(x, y) \rightarrow \underline{\hspace{2cm}}$

Write a rule for the translation.

10. left 1 unit, down 3 units  
 $\underline{\hspace{2cm}}$
11. right 1 unit, up 2 units  
 $\underline{\hspace{2cm}}$
12. left 3 units, up 2 units  
 $\underline{\hspace{2cm}}$

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