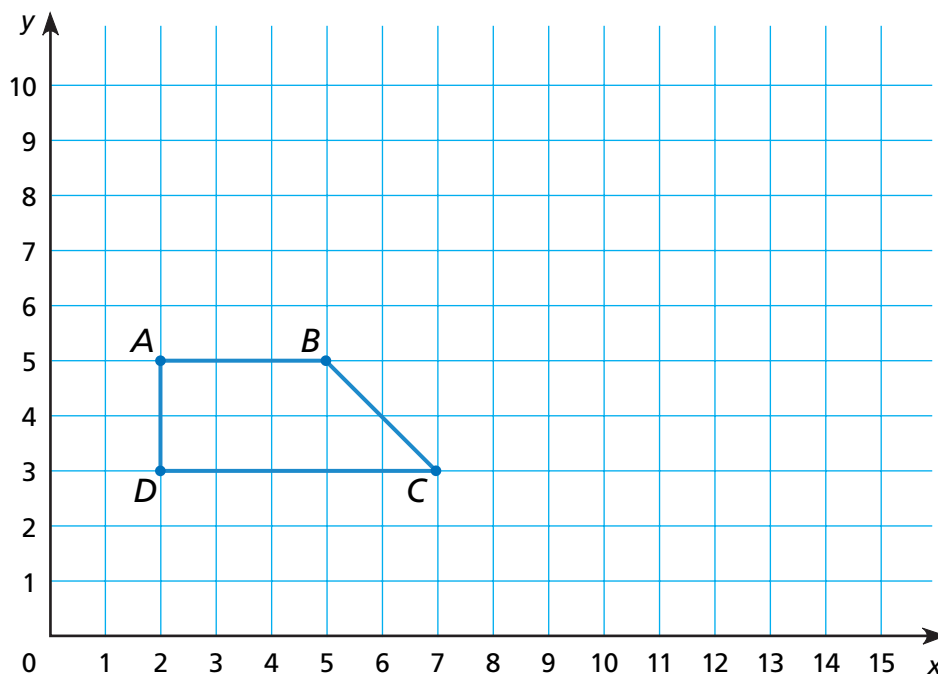


# Translating Figures on a Grid

NCTM Standards 2, 3, 7, 8, 10



- 1 Record the coordinates of the vertices of the original trapezoid.

A	B	C	D

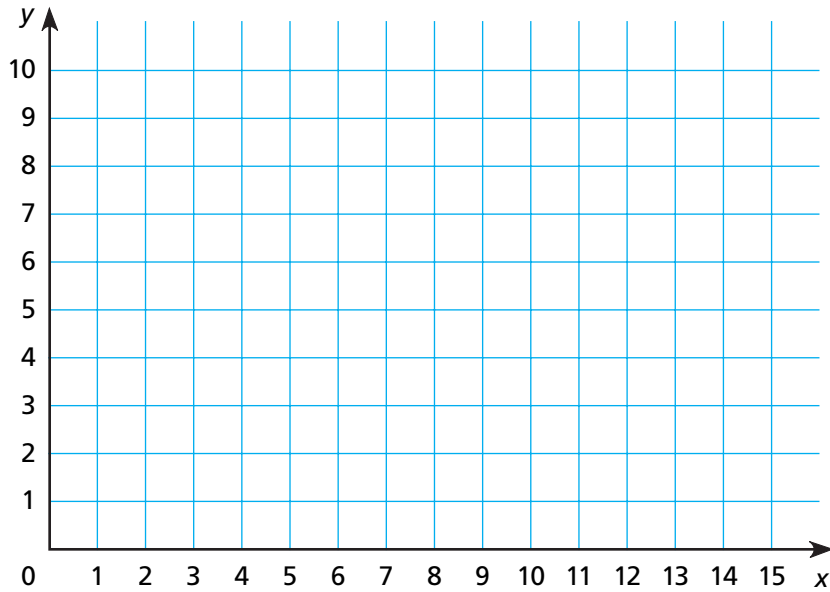
- 2 Translate the trapezoid 6 spaces to the right (east) and draw the result.

- 3 Record the new coordinates.

A'	B'	C'	D'

- 4 What is the rule?

Rule:  $(x,y)$  becomes  $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$ .



5 On the grid above, draw and label these points.

<i>L</i>	<i>M</i>	<i>N</i>	<i>O</i>
(6,10)	(8,8)	(6,6)	(4,8)

6 Then draw these line segments.  
 $\overline{LM}$ ,  $\overline{MN}$ ,  $\overline{NO}$ ,  $\overline{OL}$

7 Translate the figure 5 spaces to the right (east), and then 4 spaces down (south). Draw the new figure.

<i>L'</i>	<i>M'</i>	<i>N'</i>	<i>O'</i>

8 What is the rule for this translation?

Rule:  $(x,y)$  becomes (\_\_\_\_\_, \_\_\_\_\_).



9 **Challenge** Describe how a figure moves if the coordinates of every vertex  $(x,y)$  change to  $(x - 3, y + 4)$ .

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