1) Here is a map of part of a town.

a) Annie is at the park at the coordinate (4, 3)

She moves 3 squares to the left.
Draw on the grid to show where Annie is now.
What are the coordinates of this point?

b) Mo is at school at the coordinate $(2,1)$.

He walks 2 squares up.
Draw on the grid to show where Mo is now.
What are the coordinates of this point?

a) A plane is at point $F$.

What are the coordinates of this point?

b) The plane takes off from point F and travels 2 right and 5 down.

Mark its new position on the grid and label this as point G. What are the coordinates of point G ?

c) The plane now takes off from point $G$ and travels 4 left and 2 up.
Mark its new position and label this point H .
What are the coordinates of point H ?


a) What are the coordinates of point $A$ ?

b) Translate point A 3 to the right and 2 up. Label this point $B$ and write its coordinates.

c) Translate point B 3 to the left.

Label this point $C$ and write its coordinates.

d) Translate point C 3 to the right and 2 down.

Label this point $D$ and write its coordinates.
e) Join the points.

What shape have you made?
Create your own problem like this for a partner.
4
A rectangle is drawn on the grid.

a) Alex wants to translate the rectangle 3 to the right and 4 up.


Will Alex's method work? yed
Talk about it with a partner.
b) Translate the rectangle 3 to the right and 4 up. Complete the table to show the coordinates of each vertex before and after the translation.

| Vertex | Before | After |
| :---: | :---: | :---: |
| $J$ | $(2,4)$ | $(5,8)$ |
| $K$ | $(7,4)$ | $(10,8)$ |
| L | $(7,2)$ | $(10,6)$ |
| $M$ | $(2,2)$ | $(5,6)$ |

