1) Ramesh has plotted a coordinate in the first quadrant.
a) If the coordinate was moved one place to the left, which digit would change?
b) If the coordinate was moved three places down, which digit would change?
c) What would the new coordinates be?

2) James has translated rectangle $A$ to its new position, $B$.
a) What is the translation?
b) What are the coordinates of the two missing vertices? Plot and label c and d.

$$
\left.\begin{array}{ll}
c( & ,
\end{array}\right)
$$



## 1) Swarvek has plotted the vertices of

 a square.True or False?

a) If the square was translated to the left, the $y$ coordinate would change.
b) The square has been translated and vertex $A$ is now at $(3,3)$. The translation is ( 4 down, 1 left).
c) The square is being translated up and down. The only coordinate to change is the second digit.
d) The coordinates of the translated square could be $(5,6), 6,6),(5,7)$ and $(7,7)$.



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True or False?

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1) Shauna has translated a square in the first quadrant (2 left, 4 down). Here is the translated square. What were the
 original coordinates of vertex $D$ ?
$(3,2)$

Original coordinates of vertex D ( , )
2) The same square has now been moved to a different place on the first quadrant. Celia has given one set of coordinates for one of the vertices. Describe the translation.

3) Look at the triangle on the $5 \times 5$ grid. How many different ways can you find of translating it so that it moves but stays entirely on the grid? Try to work systematically to find all the possbilities.

4) Shauna has translated a square in the first quadrant (2 left, 4 down). Here is the translated square. What were the original coordinates of vertex $D$ ?
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Original coordinates of vertex D ( , )
5) The same square has now been moved to a different place on the first quadrant. Celia has given one set of coordinates for one of the vertices. Describe the translation.


The translation is ( , )
3) Look at the triangle on the $5 \times 5$ grid. How many different ways can you find of translating it so that it moves but stays entirely on the grid? Try to work systematically to find all the possbilities.


