## Castle Coordinates

Coordinates... remember:

- Coordinates are written as... (x coordinate , y coordinate)
- Start from the origin point $(0,0)$
- Move right (or left) along the $x$ axis to the $x$ coordinate
- Move up (or down) along the $y$ axis to the $y$ coordinate
- Draw lines up/down and left/right until they meet each other.


Sir Learnalot has drawn the outline of his castle.

## What are the coordinates of each of the points marked X?



Sir Learnalot adds two towers. One is higher than the other.
Plot each of these coordinates to draw on the towers:
Tower 1: $(0,0)(1,9)(0,7)(2,0)(2,7)$
Tower 2: $(10,0)(12,0)(11,11)(12,9)(10,9)$

Coordinates can also involve all four quadrants...


Sir Learnalot has started to design a star for his shield. It looks like the pattern above.
Some of the points have the coordinates... Label each point with the coordinate.
$(0,0)(9,4)(5,5)(4,9)(-4,7)(-5,5)(-9,4)$

One of these is wrong - can you identify it and correct it?

Can you describe the pattern in the coordinates?
Can you predict what the other coordinates will be when the pattern is completed?
Now draw the rest of the star for Sir Learnalot.
Make sure it is symmetrical. What are the other coordinates?

Now create your own symmetrical pattern for a shield.
Write down the coordinates and give them to a friend to plot. Does their design look the same as yours?


