Linear Graphs $y=mx+c$

Looking at the effect of "c":

Equation of the line:	Co-ordinates of the y-intercept	Slope of the line (upwards / downwards)
$y=2x+2$		
$y=2x-4$		
$y=2x+3$		
$y=2x$		

What do you notice about the constant and the y-intercept?

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What do you notice about the constant and the shape / slope of the line?

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Without drawing the graphs first, fill in the co-ordinates of the y-intercept for the following graphs. Then check them by drawing.

Equation of the line:	Co-ordinates of the y-intercept	Correct?
$y=x+4$		
$y=-x+1$		
$y=2x-3$		
$y=4x-2$		
$y=-2x$		

Looking at the effect of "m":

Equation of the line:	Co-ordinates of the y-intercept	Slope of the line (upwards / downwards)
$y=2x+1$		
$y=1x+1$		
$y=-2x+1$		
$y=-x+1$		
$y=\frac{1}{2}x+1$		

What do you notice about the m-value and the y-intercept?

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What do you notice about the m-value and the shape / slope of the line?

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Without plotting the graph first, say what you think the slope and y-intercept will be for the following equations:

Equation of the line:	Co-ordinates of the y-intercept	Slope of the line (upwards / downwards)
$y=2x-1$		
$y=-4x+1$		
$y=-x$		
$y=-2x+3$		
$y=\frac{1}{2}x-2$		