1. Complete the table of values and graph the following lines on the same graph.

$y = 2x - 5$

x	$y = 2x - 5$	(x,y)
-2	$= 2(-2) - 5$ $= -4 - 5 = \boxed{-9}$	$(-2, -9)$
-1	$= 2(-1) - 5$ $= -2 - 5 = \boxed{-7}$	$(-1, -7)$
0	$= 2(0) - 5$ $= -5$	$(0, -5)$
1	$= 2(1) - 5$ $= -3$	$(1, -3)$
2	$= 2(2) - 5$ $= 4 - 5 = -1$	$(2, -1)$
3	$= 2(3) - 5$ $= 6 - 5 = 1$	$(3, 1)$

$y = 2x$

x	$y = 2x$	(x,y)
-2	$= 2(-2)$ $= -4$	$(-2, -4)$
-1	$= 2(-1)$ $= -2$	$(-1, -2)$
0	$= 2(0)$ $= 0$	$(0, 0)$
1	$= 2(1)$ $= 2$	$(1, 2)$
2	$= 2(2)$ $= 4$	$(2, 4)$
3	$= 2(3)$ $= 6$	$(3, 6)$

$y = 2x + 1$

x	$y = 2x + 1$	(x,y)
-2	$= 2(-2) + 1$ $= -4 + 1 = -3$	$(-2, -3)$
-1	$= 2(-1) + 1$ $= -2 + 1 = -1$	$(-1, -1)$
0	$= 2(0) + 1$ $= 1$	$(0, 1)$
1	$= 2(1) + 1$ $= 2 + 1 = 3$	$(1, 3)$
2	$= 2(2) + 1$ $= 4 + 1 = 5$	$(2, 5)$
3	$= 2(3) + 1$ $= 6 + 1 = 7$	$(3, 7)$

a)   What is the same about each of these lines?

Three of them have the same slope which makes them parellel.

slope = 2

b)   What is different about each of these lines?

They cross the "y" axis at different points.
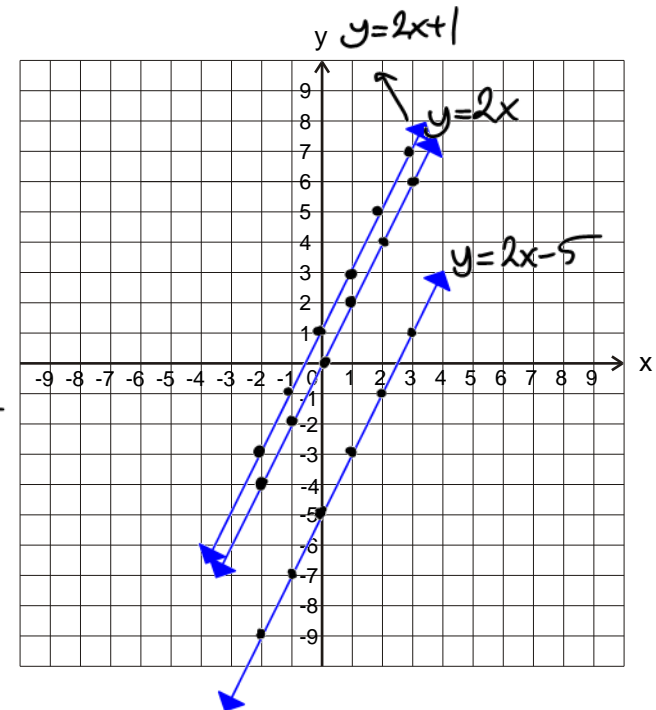
2. Complete the table of values and graph the following lines on the same graph.

$$y = \frac{1}{2}x - 5$$

x	$y = \frac{1}{2}x - 5$	(x,y)
-2	$=0.5(-2)-5$ $=-1-5$	$(-2,-6)$
-1	$=0.5(-1)-5$ $=-0.5-5=-5.5$	$(-1,-5.5)$
0	$=0.5(0)-5$ $=-5$	$(0,-5)$
1	$=0.5(1)-5$ $=-4.5$	$(1,-4.5)$
2	$=0.5(2)-5$ $=1-5$	$(2,-4)$
3	$=0.5(3)-5$ $=1.5-5=-3.5$	$(3,-3.5)$

$$y = 3x - 5$$

x	$y = 3x - 5$	(x,y)
-2	$3(-2)-5$ $=-6-5=-11$	$(-2,-11)$
-1	$3(-1)-5$ $=-3-5=-8$	$(-1,-8)$
0	$3(0)-5$ $=-5$	$(0,-5)$
1	$3(1)-5$ $=3-5=-2$	$(1,-2)$
2	$2(3)-5$ $=6-5=1$	$(2,1)$
3	$3(3)-5$ $=9-5=4$	$(3,4)$

$$y = 2x - 5$$

x	$y = 2x - 5$	(x,y)
-2		$(-2,-9)$
-1		$(-1,-7)$
0		$(0,-5)$
1		$(1,-3)$
2		$(2,-1)$
3		$(3,1)$

$y = 3x - 5$ $y = 2x - 5$ $y = \frac{1}{2}x - 5$

a) What is the same about each of these lines?

They cross the same point on 'y' axis

b) What is different about each of these lines?

They're different slopes.
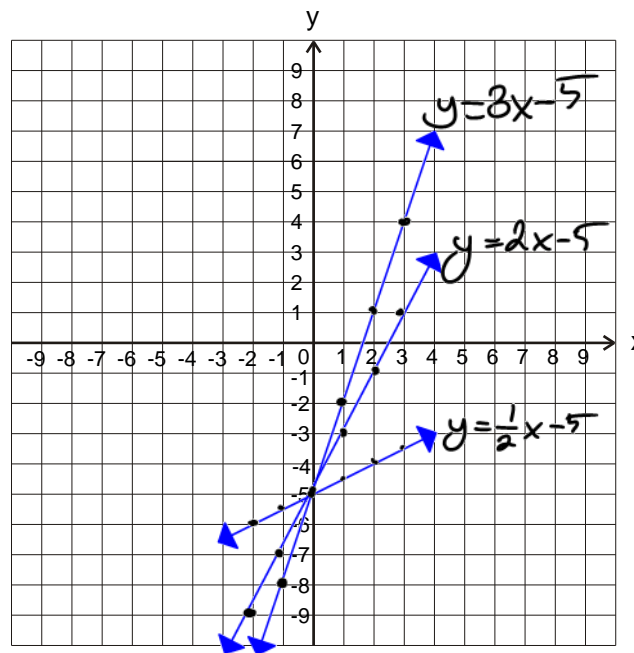
3. The above lines are in the form $y = mx + b$ where m *and* b are numbers.

   a)   What does the value of m tell us about the graph of the line?

   m tells about the slope of the line.

   b)   What does the value of b tell us about the graph of the line?

   b tells us about where the graph cuts the "y" axis.
   We call this special point "y" intercept.

2.   Given the equation $y = \dfrac{1}{2}x + 4$, how would you graph the line without using a table of values?

Slope $= \dfrac{1}{2}$

$\dfrac{rise}{run} = \dfrac{1}{2}$