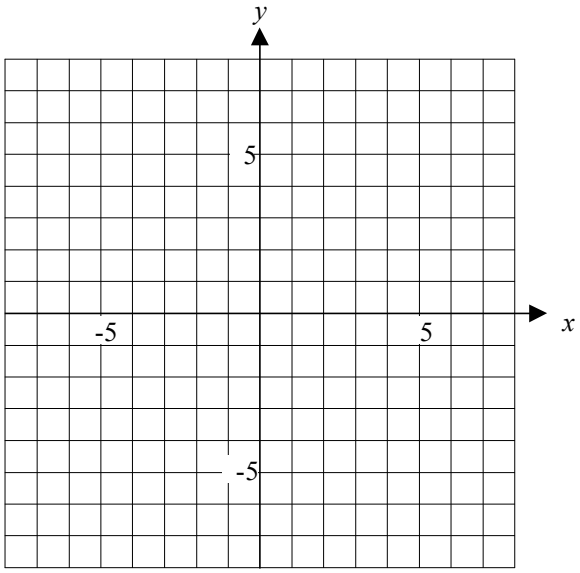
Linear Relations

Coordinate Geometry and Substitution

(x, y) is an ordered pair

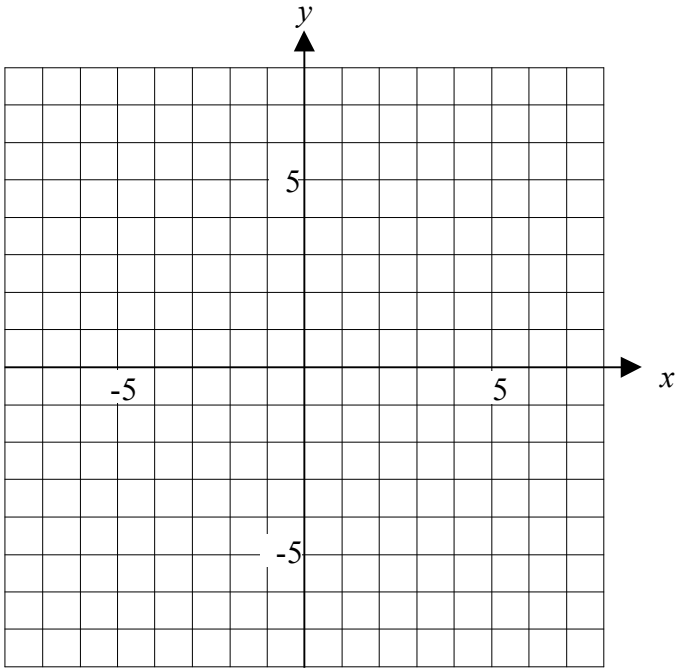


State which Quadrant each ordered pair is in.

(-3, -7)
(3, -1)
(2, 6)
(-2, 4)
(2, 5)
(4, -8)
(-4, -6)
(5, -9)

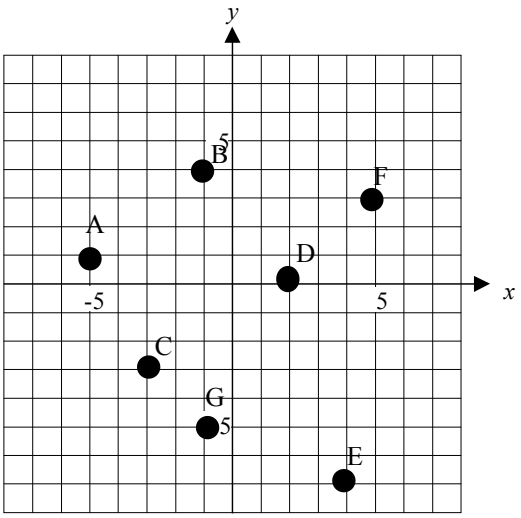
Plot on the grid

A (2, 7)
B (- 3, 4)
C (0, 6)
D (2, -5)
E (- 3, - 5)
F (0, 0)
G (- 7, 0)
H (- 2, 7)
I (3, 6)
J (1, - 4)
K (0, - 3)
L (- 4, - 2)



State the coordinates of each point on the graph.

A
B
C
D
E
F
G



Substitution

Given x = 3 solve for y.

1. y = x + 4

2. y = x

3. y = x – 2

4. y = x + 5

5. y = 2x – 1

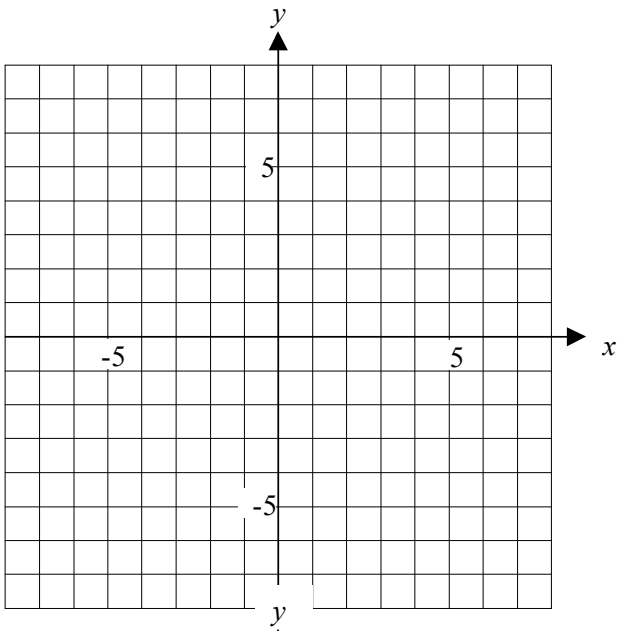
6. y = -3x + 2

Graphing using a table of values.

Create a table of values for each linear relation and then graph the relation.

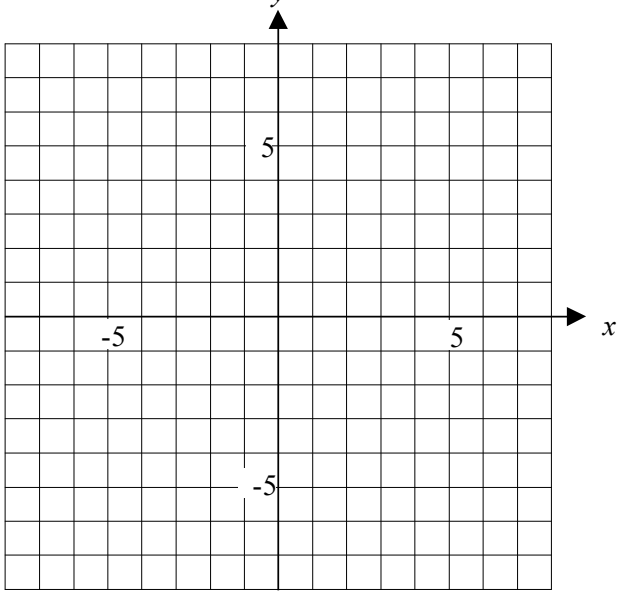
a) $y = x + 4$

x	y
-2	
-1	
0	
1	
2	

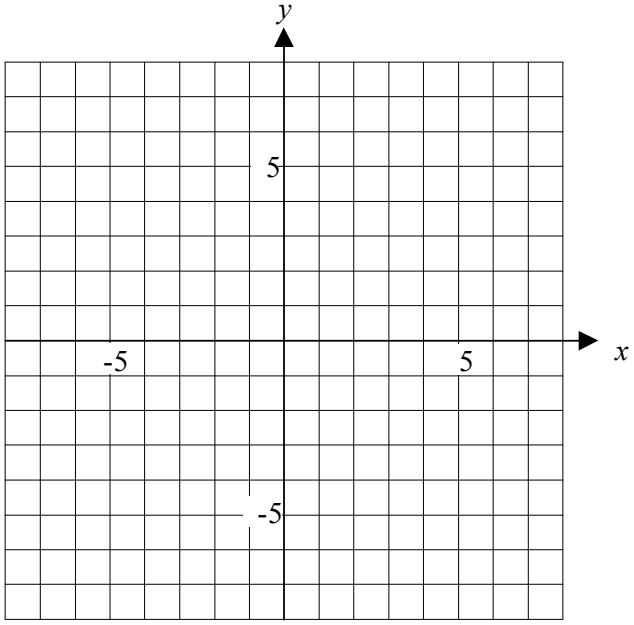


b) $y = 2x + 1$

x	y
-2	
-1	
0	
1	
2	



c) $y = 5 - 2x$

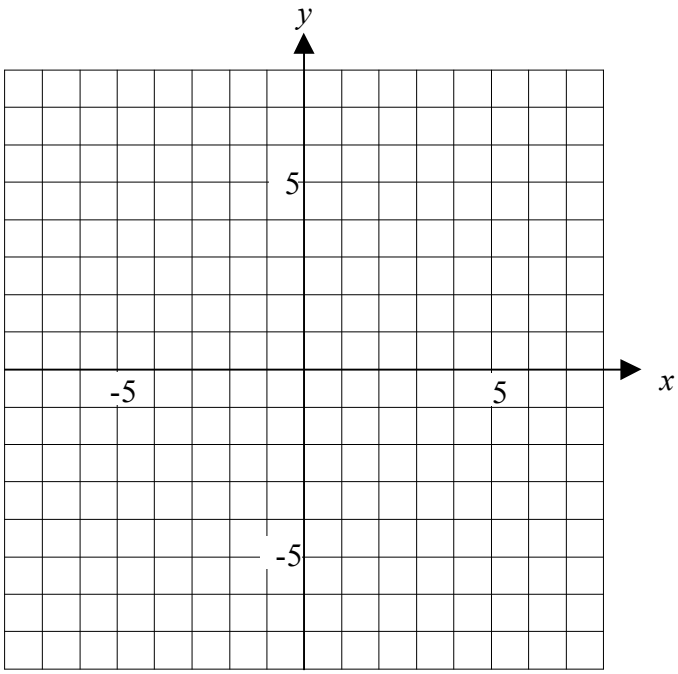


Graphing Lines using a table of values

Examples:

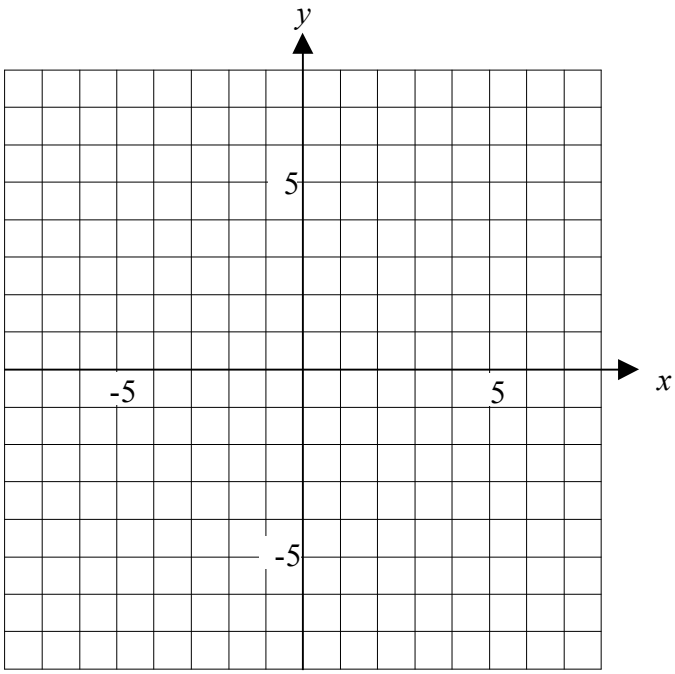
$y = 1x + 3$

1.

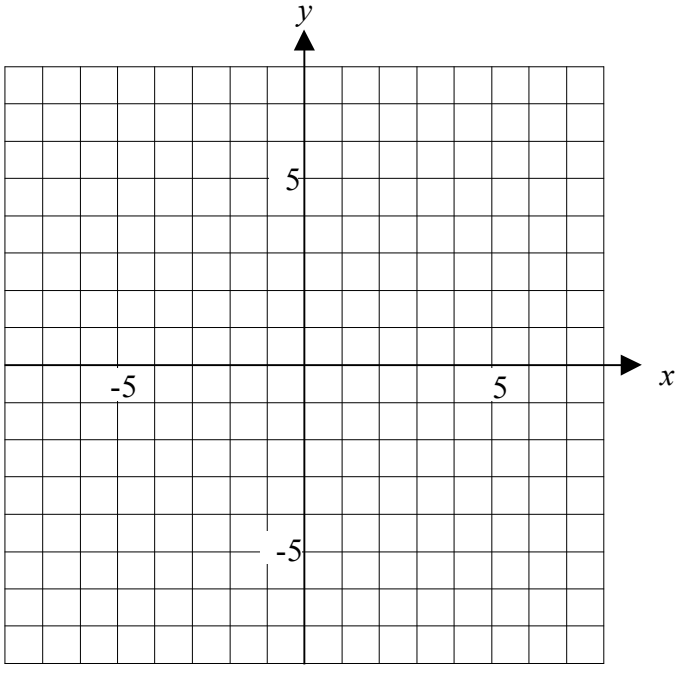


$y = -2x + 1$

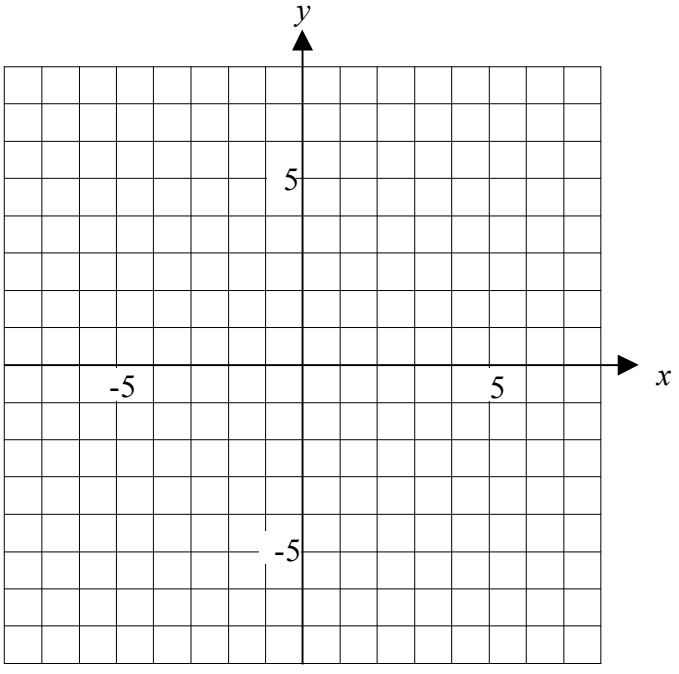
2.



3. y = 2x - 5

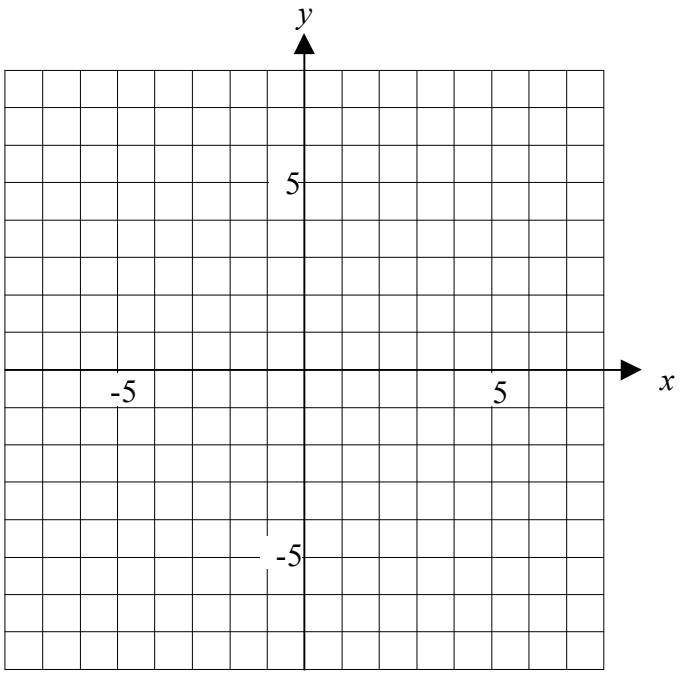


4. y = -3x + 4

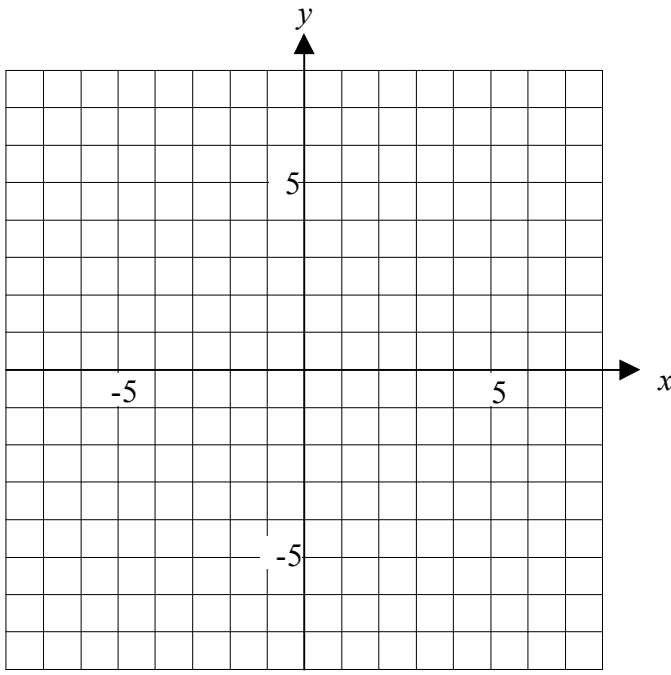


$y = 3x + 2$

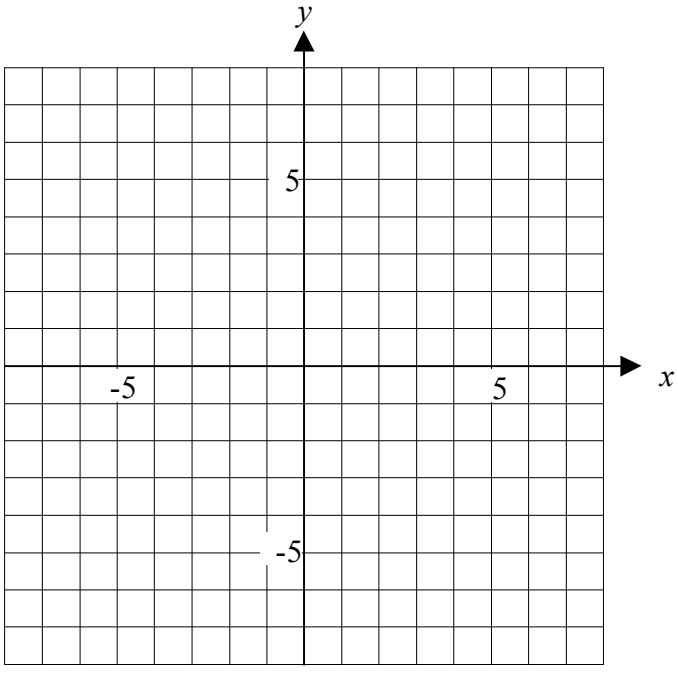
5.



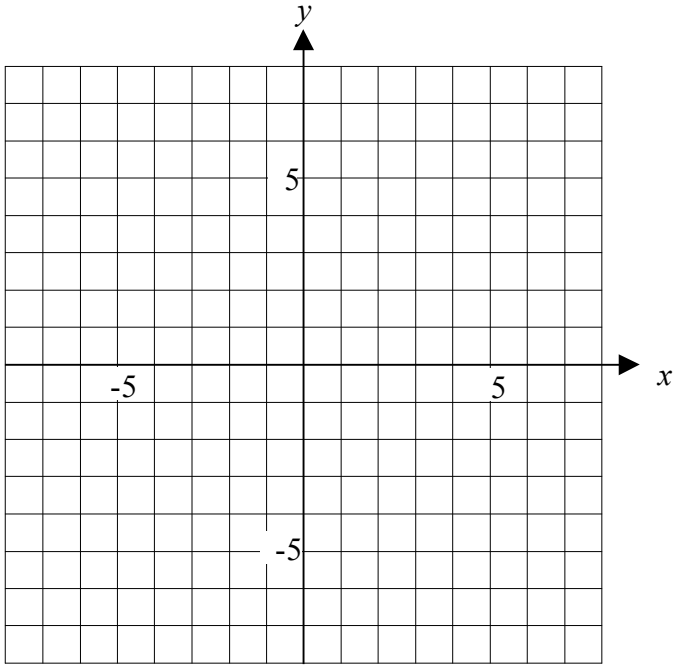
6. $y = -2x + 0$



7. y = -2x + 3



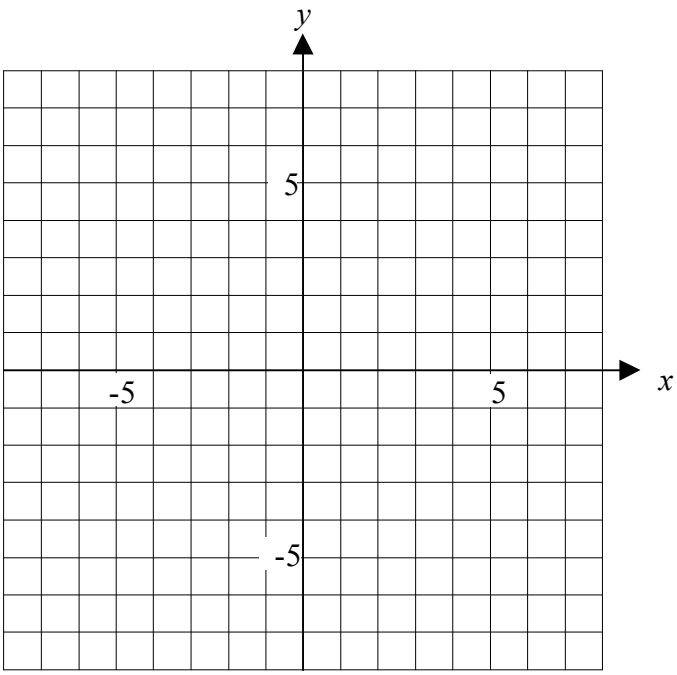
8. y = -x + 6



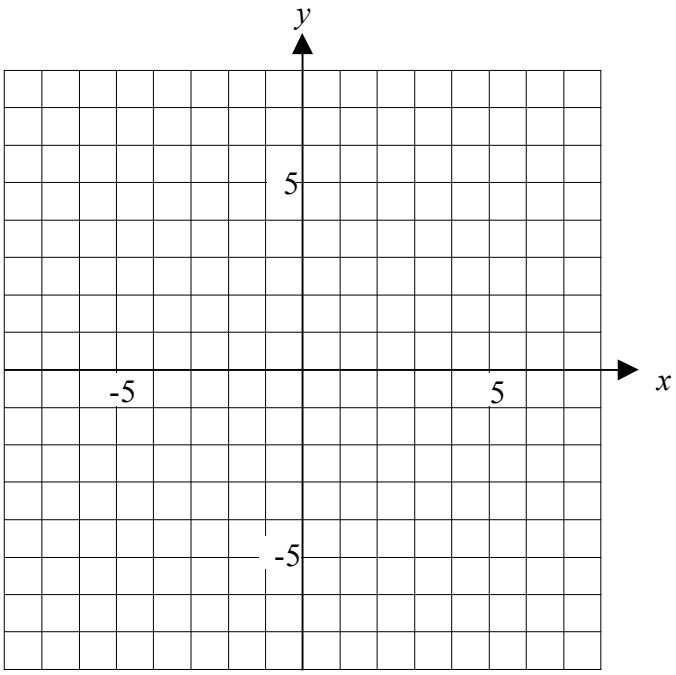
Graphing $y = mx + b$

Graph using a table.

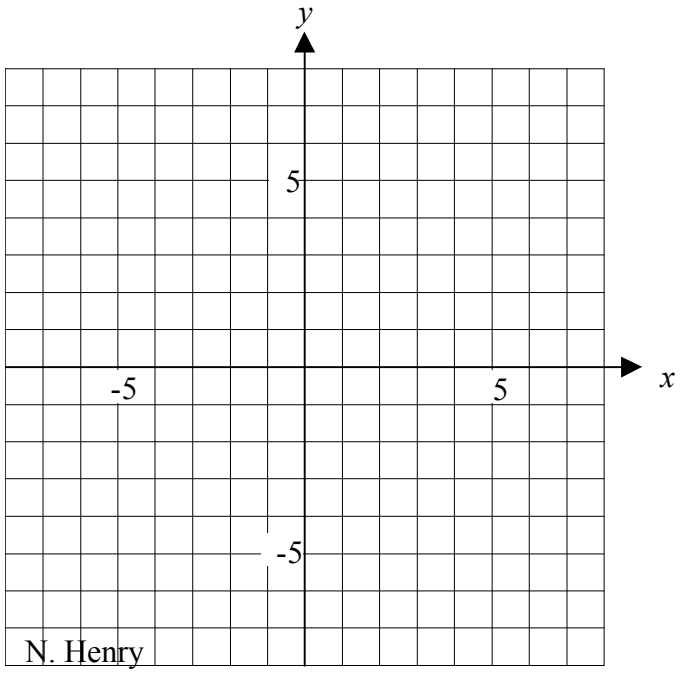
1. $y = 4x - 2$



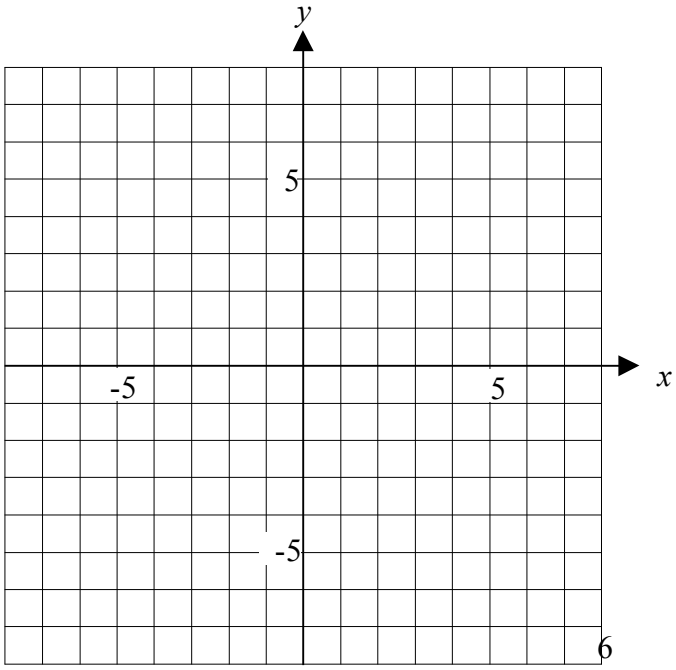
`2. y = -3x + 5



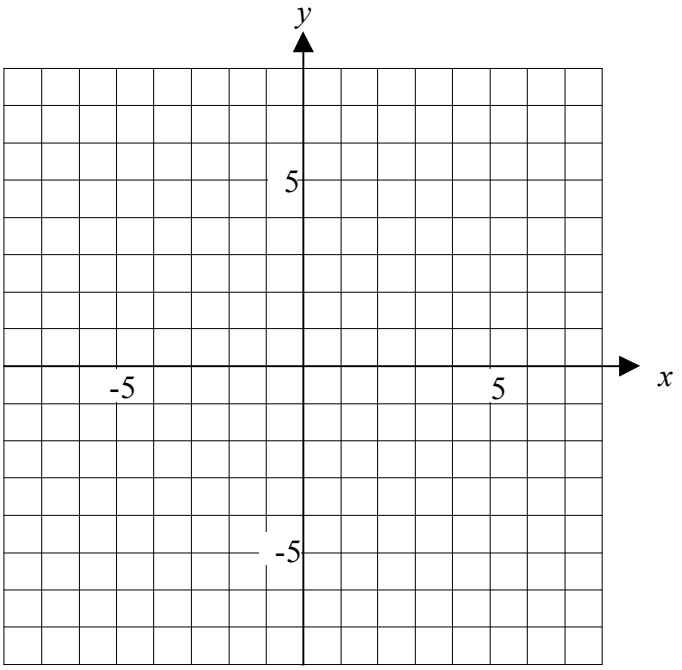
3. y = 2x - 3



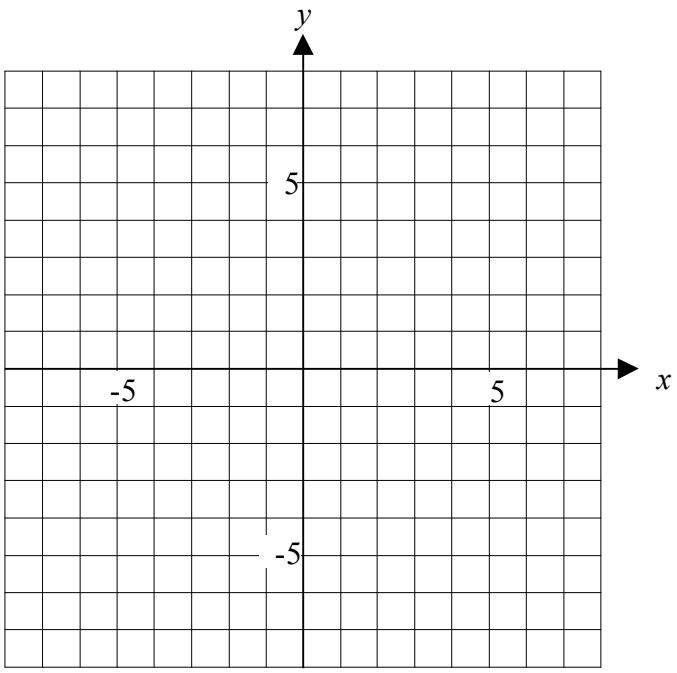
4. $y = -1x + 1$



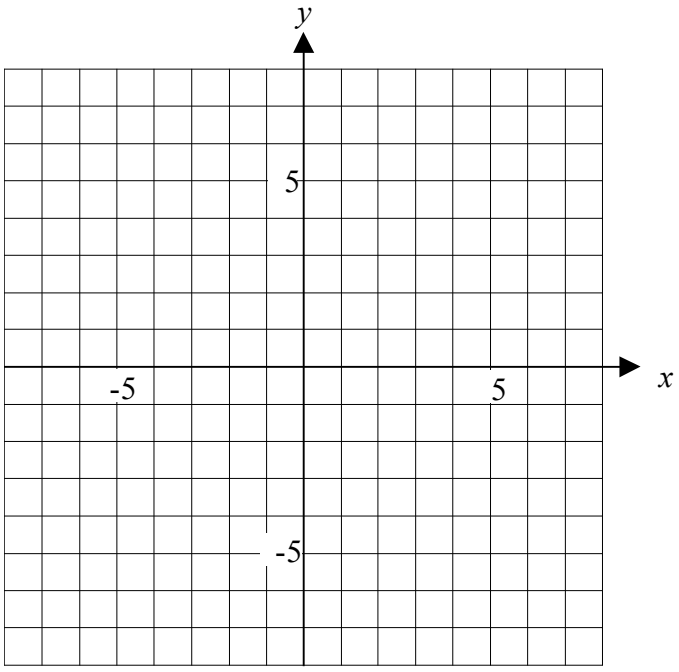
5. $y = x + 4$



6. $y = -3x + 8$



7. $y = 2x - 6$



8. $y = -x + 5$