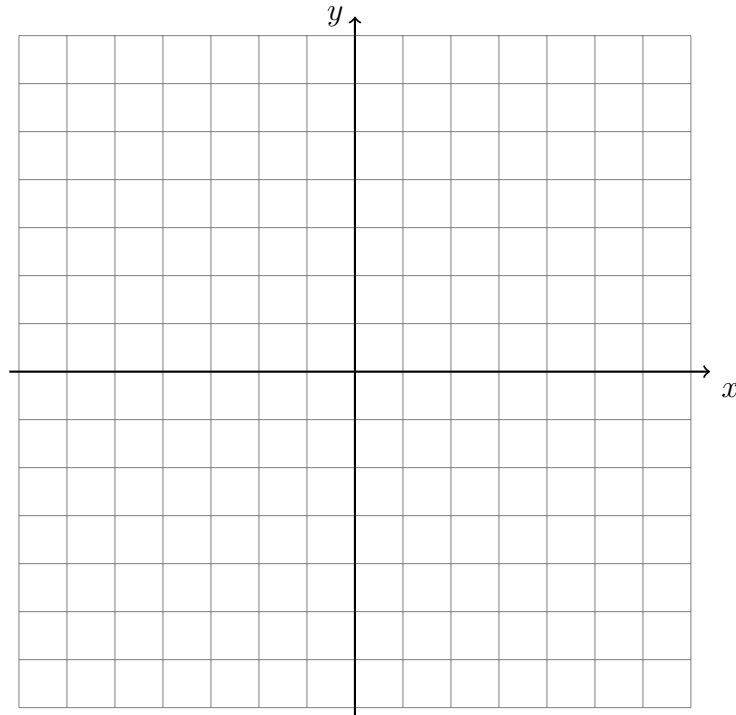


Do Now: Graphing practice

1. Graph the line $y = -2x + 2$ after filling in the values in the blanks.

y -intercept = _____

Slope = _____



In the following two problems, solve for the value of x .

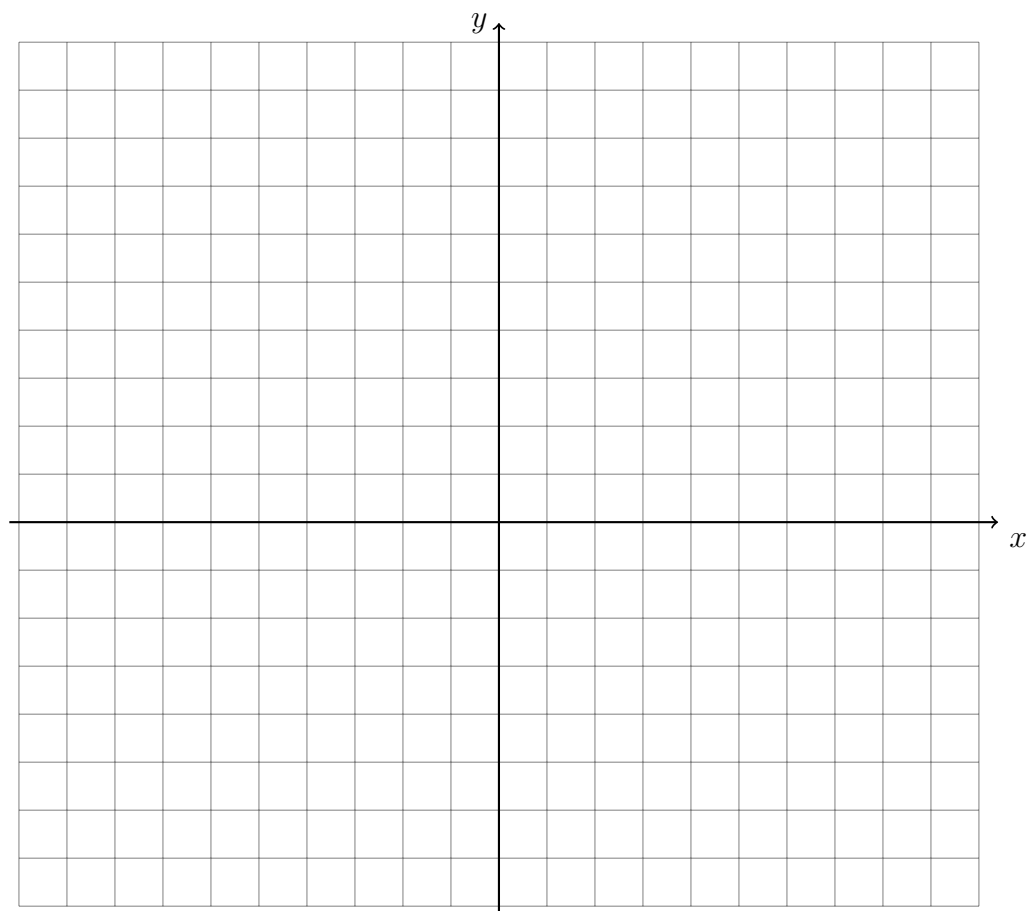
2. $5x - 8 = 3x - 4$

3. $\frac{1}{2}(8 - 2x) = 16$

4. Graph the two inequalities. Mark a point in the solution set and label it as an ordered pair.

$$y > \frac{1}{2}x + 6$$

$$x + y \leq 3$$



5. Solve each equation for y .

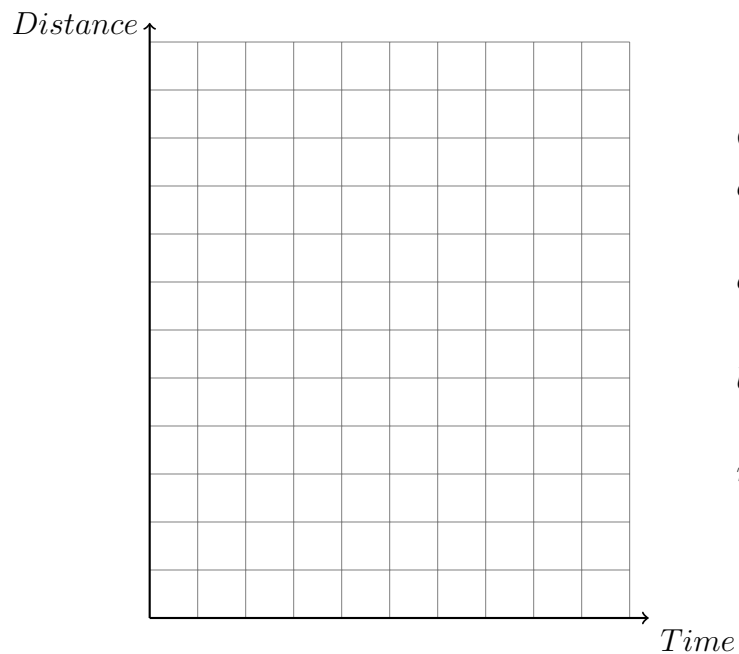
(a) $x + 2y = -8$

(a) $10x - 5y = 15$

Fitting linear models and interpreting correlation

6. A turtle's distance from the water in inches after different amounts of time (in minutes) is shown in the table.

Inches	75	60	35	20
Minutes	2	5	7	9



Calculator

$$ax + b$$

$$a = \underline{\hspace{2cm}}$$

$$b = \underline{\hspace{2cm}}$$

$$r = \underline{\hspace{2cm}}$$

State, to the *nearest whole number*, the linear regression equation that approximates the turtle's distance from the water, y , after x minutes.

Explain what the y -intercept means in the context of the problem.

Explain what the slope means in the context of the problem.

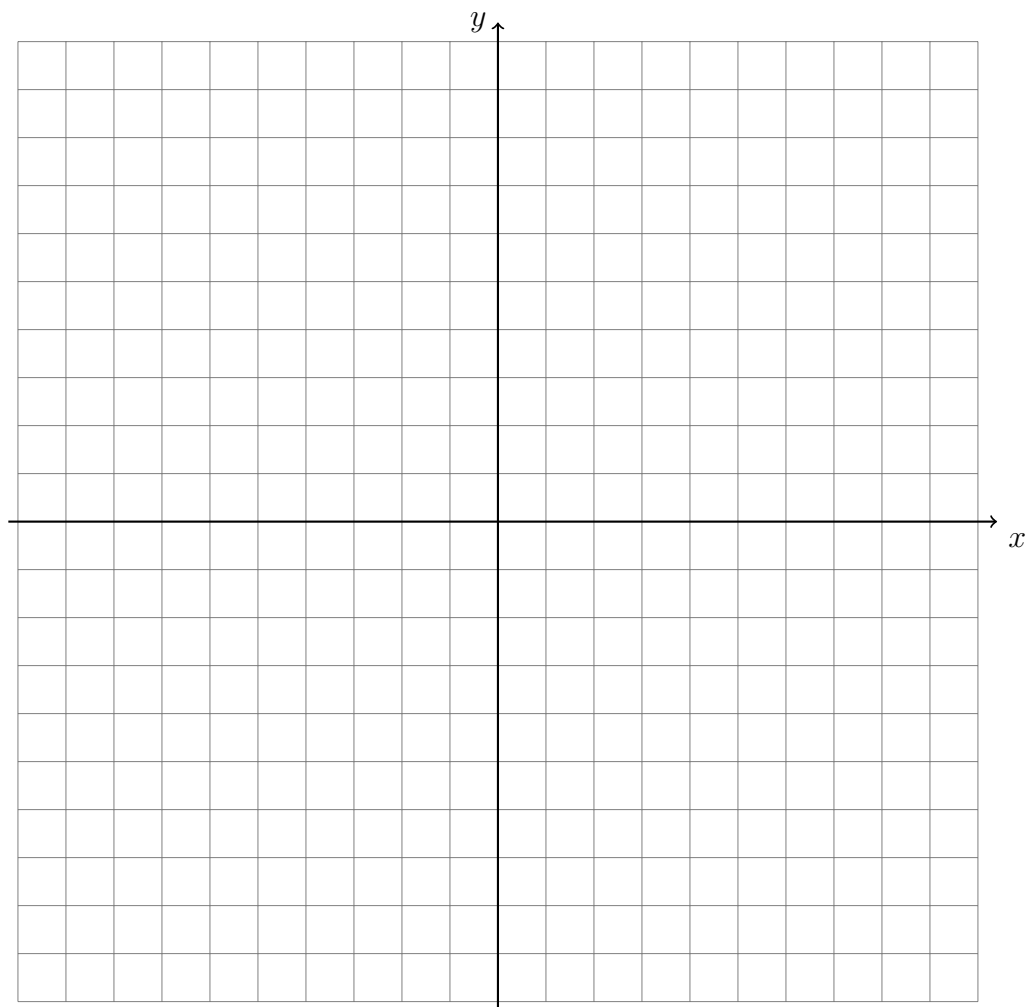
9. Write the expression $4x + x^2(2x - 3) - 2x^2 - 7x$ as a polynomial in standard form.

Graphing quadratic functions

10. Given the quadratic function $f(x) = x^2 + 1$, find the row differences.

x	$f(x)$
-3	10
-2	5
-1	2
0	1
1	2
2	5
3	10

Graph the function as a line over the domain $-3 \leq x \leq 3$.



Rate of change

11. Find the slope of the function from the ratio of the line differences.

(a)

x	$f(x)$
-2	-1
-1	1
0	3
1	5
2	7

Change in y = _____

Change in x = _____

Slope = _____

(b)

x	$f(x)$
-4	7
-2	4
0	1
2	-2
4	-5

Change in y = _____

Change in x = _____

Slope = _____

12. Find the slope of the function. If the rate of change is not constant, write, "Non-linear. The rate of change is not constant."

(a)

x	$f(x)$
-3	0
-1	2
0	3
1	4
3	6

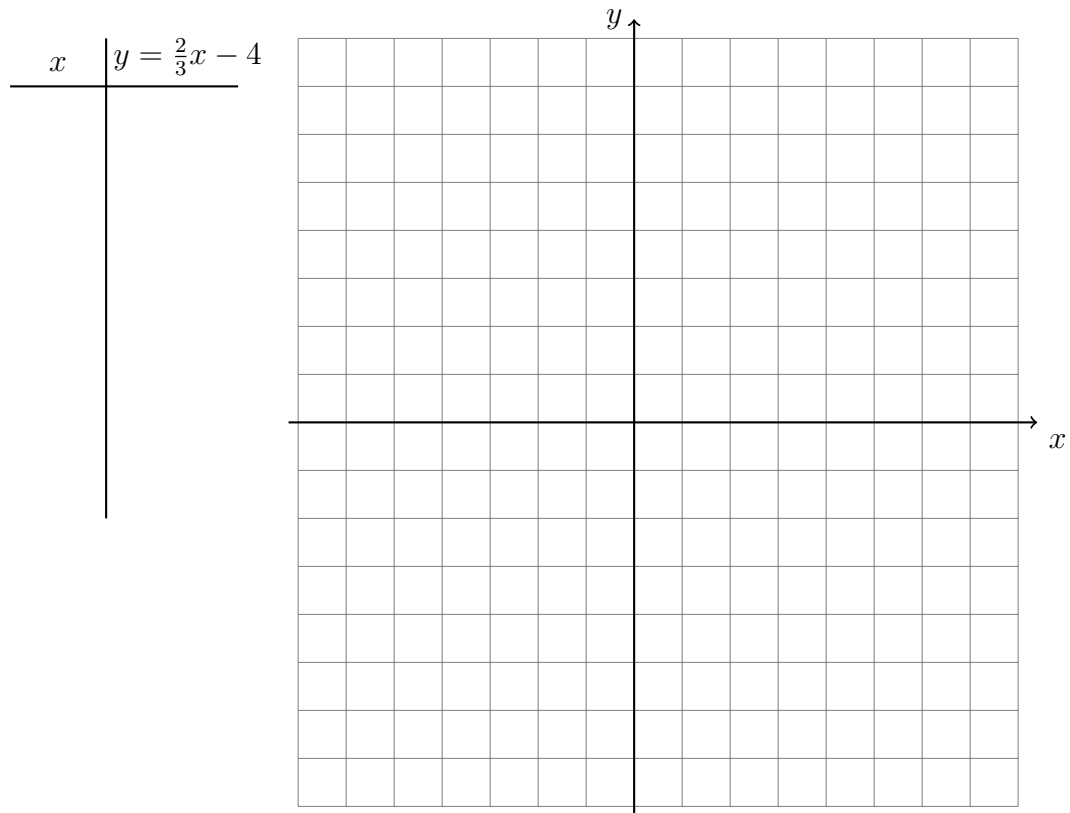
Slope = _____

(b)

x	$f(x)$
-4	-9
-2	-3
0	+1
2	-3
4	-9

Slope = _____

13. Fill in the T-chart, plot the points, and draw the line.



Write down the slope and y -intercept of the line.

$m =$

$b =$

Circle the row for the y -intercept.