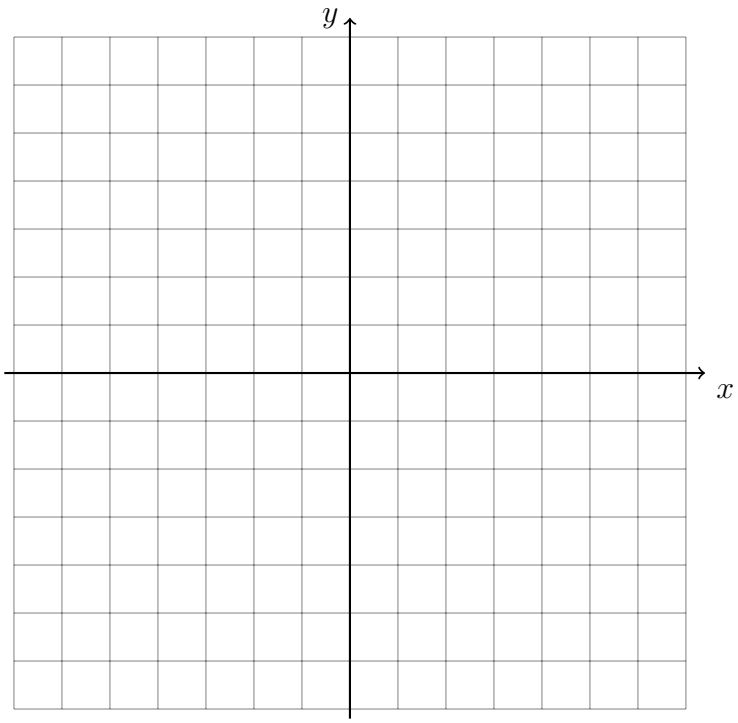
Do Now: Graphing inequalities

Show your work. For graphs, use a pencil and straight edge. Graph the inequality after filling in the values in the blanks and circling the correct types.

1. $y > -\frac{3}{4}x + 2$

   y-intercept $b =$ _____ Line: Solid ($=$) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)



2. Solve for y, then complete. $\frac{1}{2}x + y \geq -4$

   y-intercept $b =$ _____ Line: Solid ($=$) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)

3. Graph the two lines after filling in the values in the blanks.

   Label both lines and the solution to the system, the intersection, as a coordinate pair.

   $y = 2x - 5$

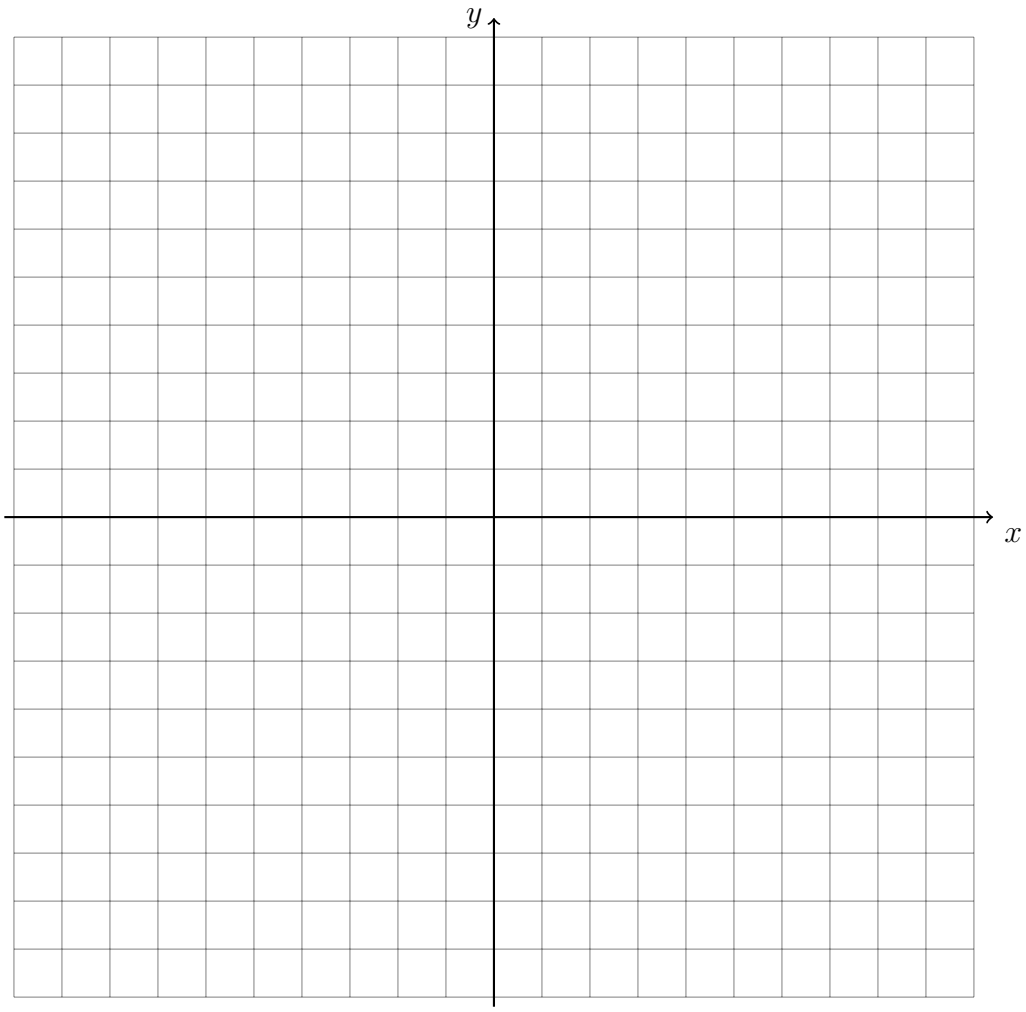
   (a) y-intercept $b =$ _____

   (b) Slope $m =$ _____

   $y = \frac{1}{2}x + 4$

   (a) y-intercept $b =$ _____

   (b) Slope $m =$ _____



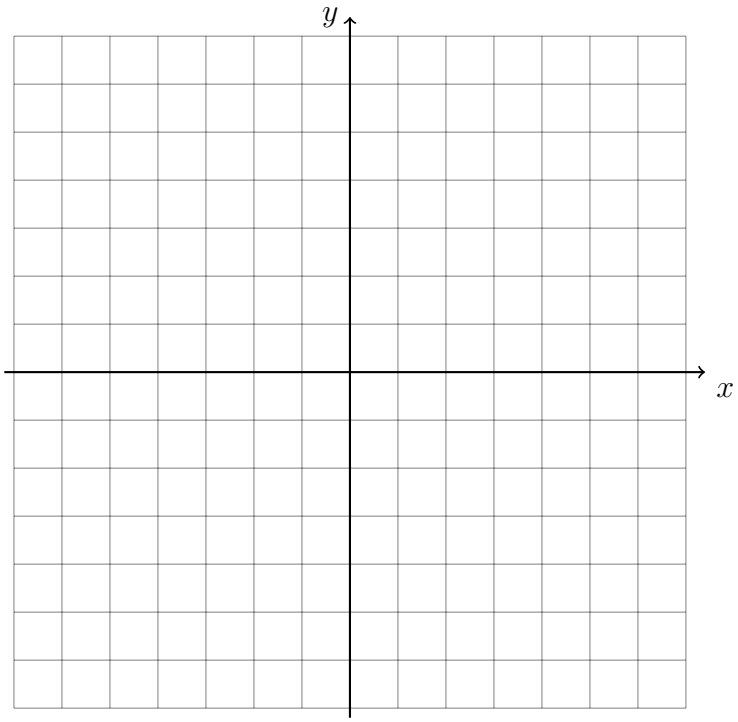
Do Now: Graphing inequalities

Show your work. For graphs, use a pencil and straight edge. Graph the inequality after filling in the values in the blanks and circling the correct types.

1. $\frac{3}{2}x - 2y \leq +2$

   y-intercept $b =$ _____ Line: Solid (=) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)



2. Solve for y, then complete. $\frac{3}{2}x - 3y \geq 6$

   y-intercept $b =$ _____ Line: Solid (=) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)

3. Graph the two inequalities after filling in the values in the blanks.

   Label both lines and the solution to the system, the intersection, as a coordinate pair.

   $y \geq -3x + 1$

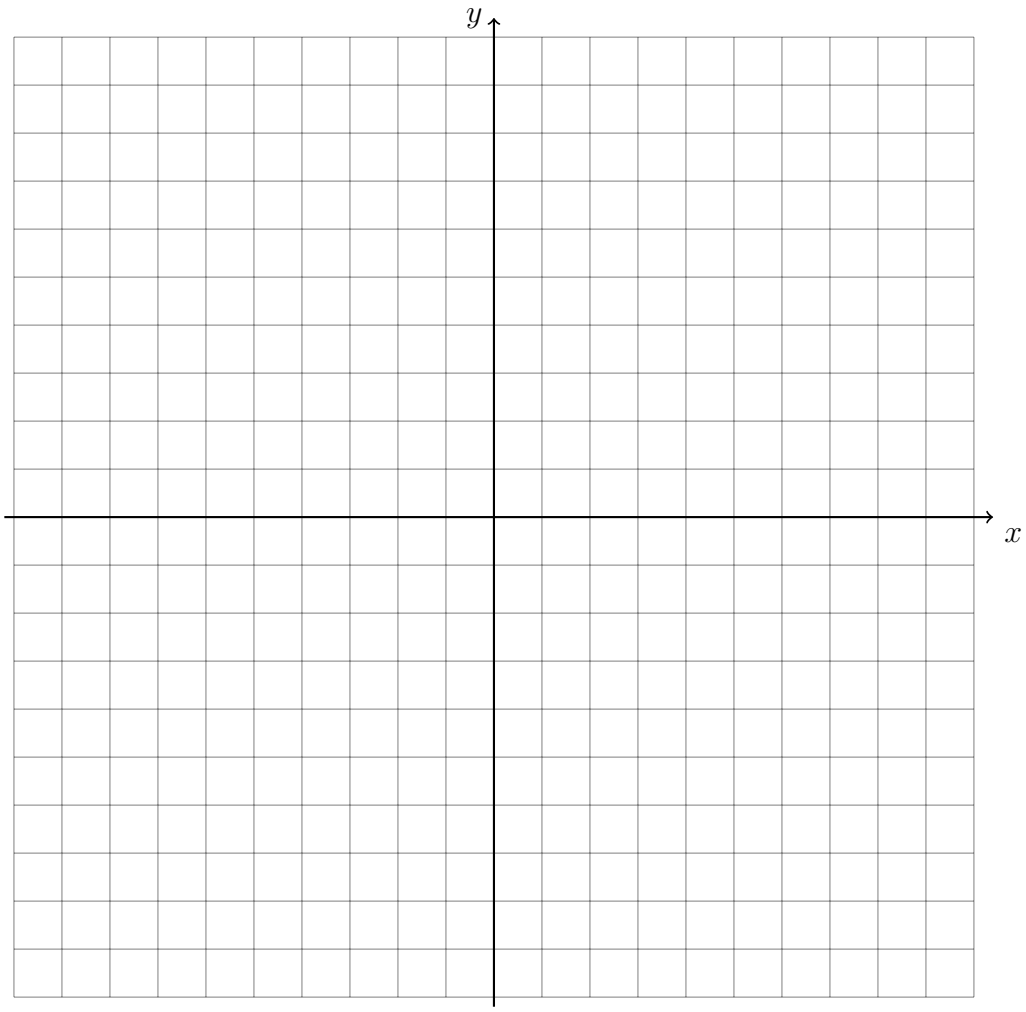
   (a) y-intercept $b =$ _____

   (b) Slope $m =$ _____

   $y < -\frac{3}{2}x - 2$

   (a) y-intercept $b =$ _____

   (b) Slope $m =$ _____



Rate of change

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

(a)

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

Change in $y =$ _____

Change in $x =$ _____

Slope $m =$ _____

(b)

x	$f(x)$
-4	9
-2	6
0	3
2	0
4	-3

Change in $y =$ _____

Change in $x =$ _____

Slope $m =$ _____

5. 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 $m =$ _____

(b)

x	$f(x)$
-4	7
-2	5
0	3
2	5
4	7

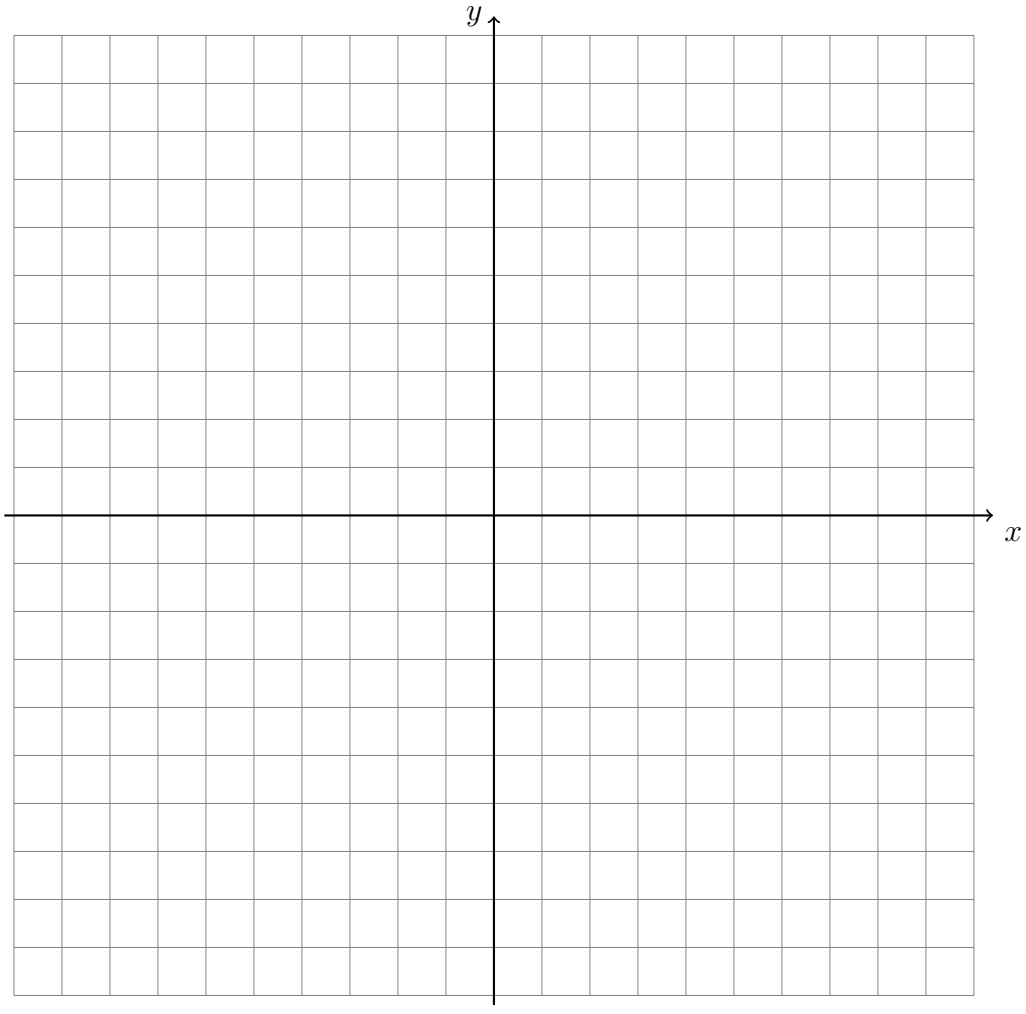
Slope $m =$ _____

Graphing quadratic functions

6. Given the quadratic function $f(x) = x^2 - 2$, find the row differences.

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

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



Pop Quiz: Graphing inequalities

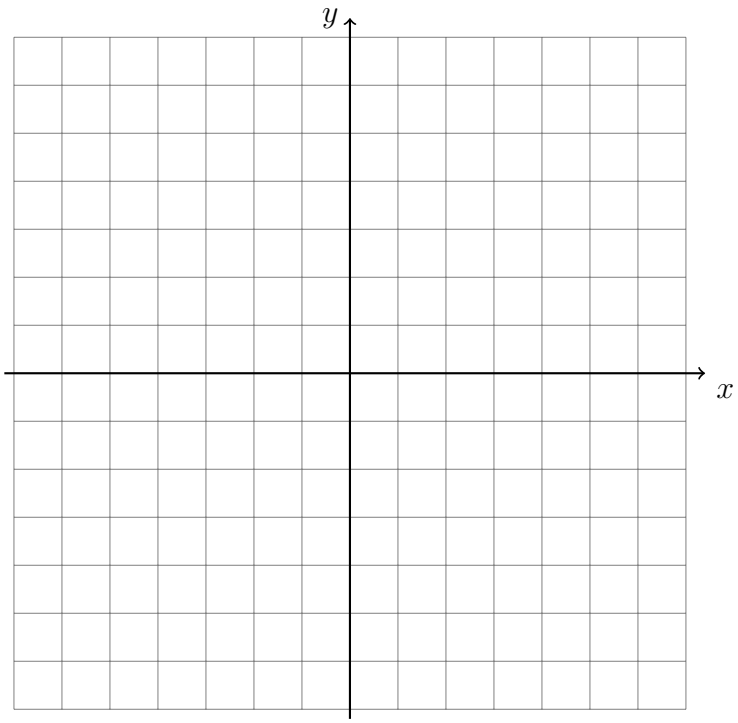
Fill in the values in the blanks and circling the correct types.

1. $y < \frac{1}{2}x + 3$

   y-intercept $b =$ _____ Line: Solid ($=$) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)

   Graph the inequality (use a pencil and straight edge - 1 point)



2. Solve for y, then complete. $2x + y \geq -4$

   y-intercept $b =$ _____ Line: Solid ($=$) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)

3. Graph the two lines after filling in the values in the blanks.

$y = x - 2$

(a) y-intercept $b =$ _____

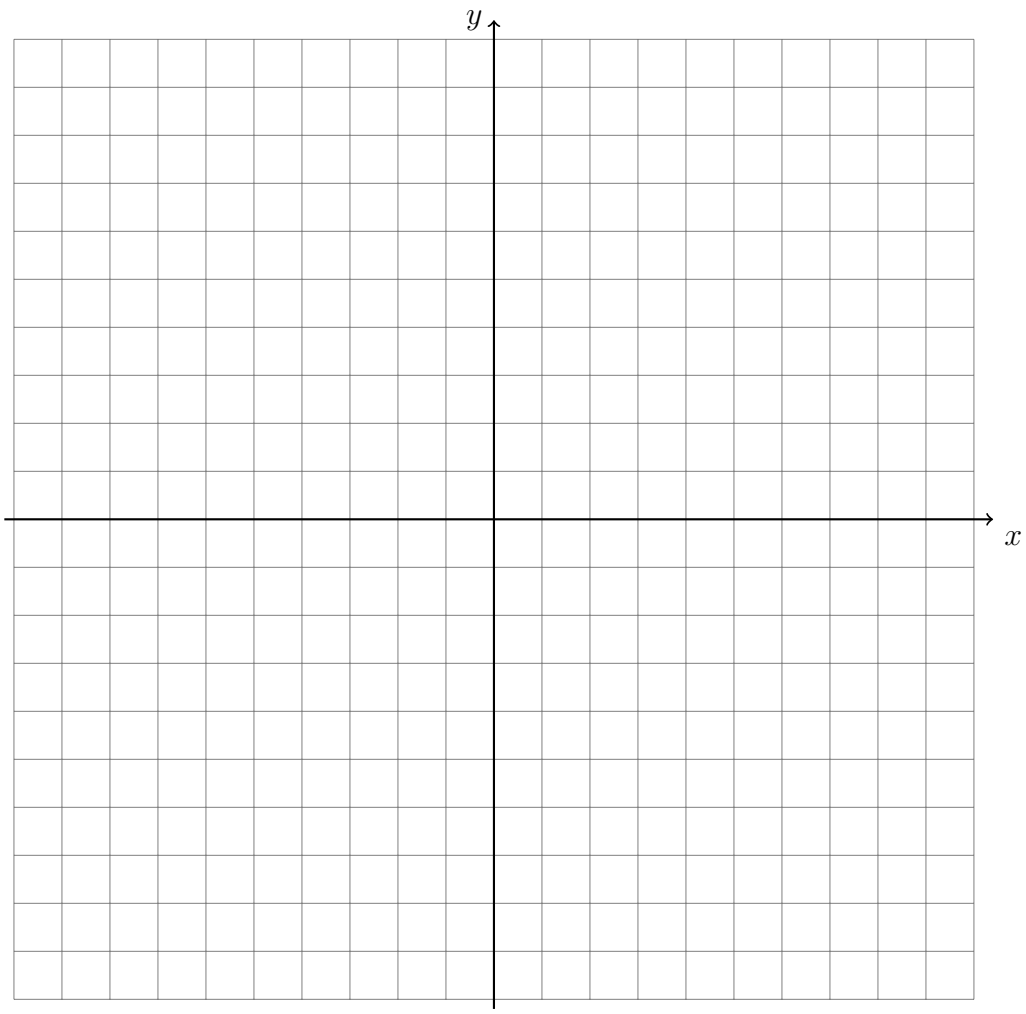
(b) Slope $m =$ _____

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

(a) y-intercept $b =$ _____

(b) Slope $m =$ _____

Label both lines and the solution to the system, the intersection, as a coordinate pair. (3 points) Use pencil for graph (1 point)



Homework: Graphing systems of equations

1. Graph the two lines after filling in the values in the blanks.

$y = x - 2$

(a) y-intercept $b =$ _____

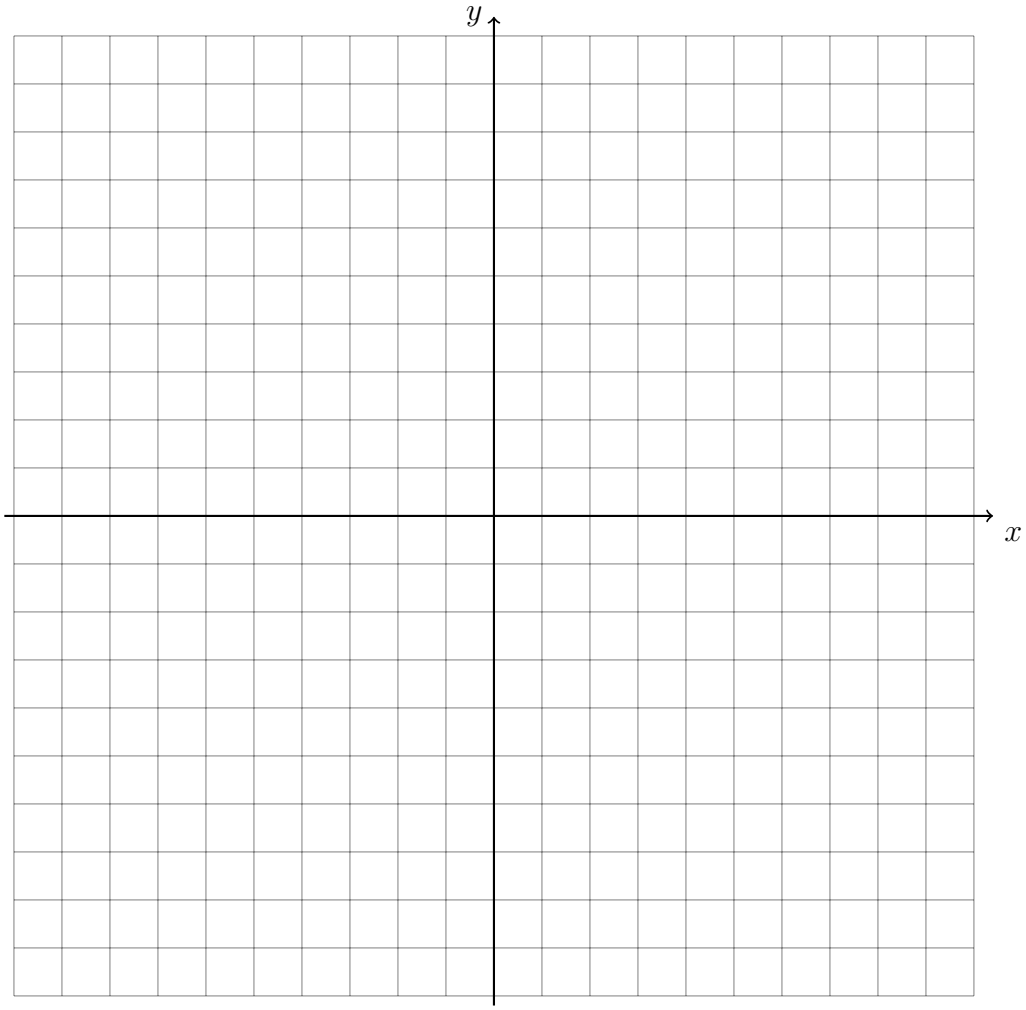
(b) Slope $m =$ _____

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

(a) y-intercept $b =$ _____

(b) Slope $m =$ _____

Label both lines and the solution to the system, the intersection, as a coordinate pair. (3 points) Use pencil for graph (1 point)



Classwork: Happy New Year!
Due at the end of the period.

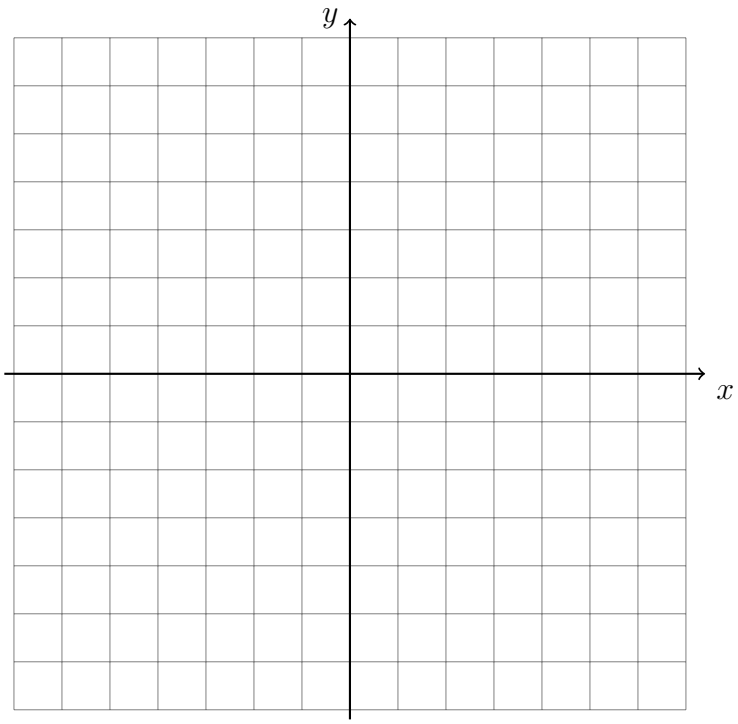
Fill in the values in the blanks and circling the correct types.

1. $y \leq \frac{2}{3}x + 1$

   y-intercept $b =$ _____ Line: Solid ($=$) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)

   Graph the inequality (use a pencil and straight edge - 1 point)



2. Solve for y, then complete. $x + 2y > 3$

   y-intercept $b =$ _____ Line: Solid ($=$) Dashed ($\neq$)

   Slope $m =$ _____ Shading: Above ($y >$) Below ($y <$)

3. Graph the two lines after filling in the values in the blanks.

$y = 2x - 3$

(a) y-intercept $b =$ _____

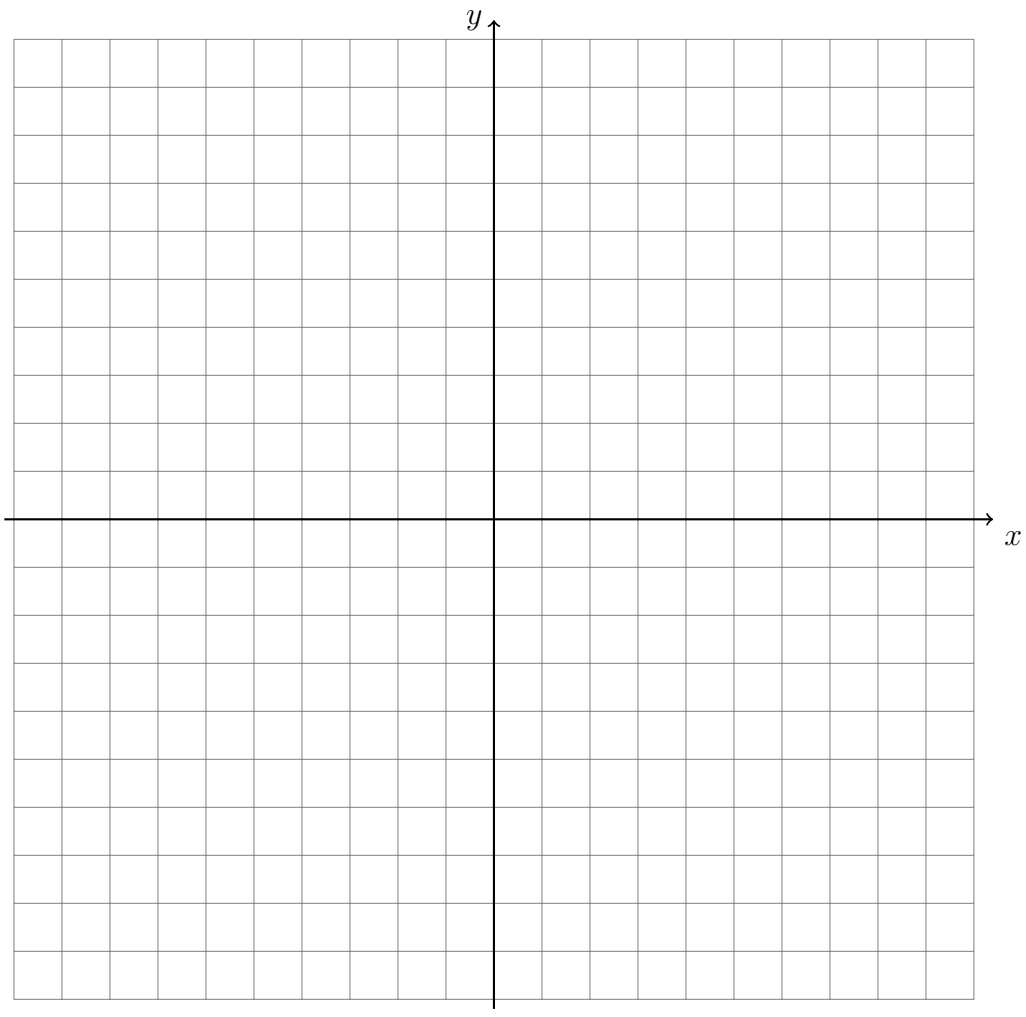
(b) Slope $m =$ _____

$y = -\frac{1}{3}x + 4$

(a) y-intercept $b =$ _____

(b) Slope $m =$ _____

Label both lines and the solution to the system, the intersection, as a coordinate pair. (3 points) Use pencil for graph (1 point)

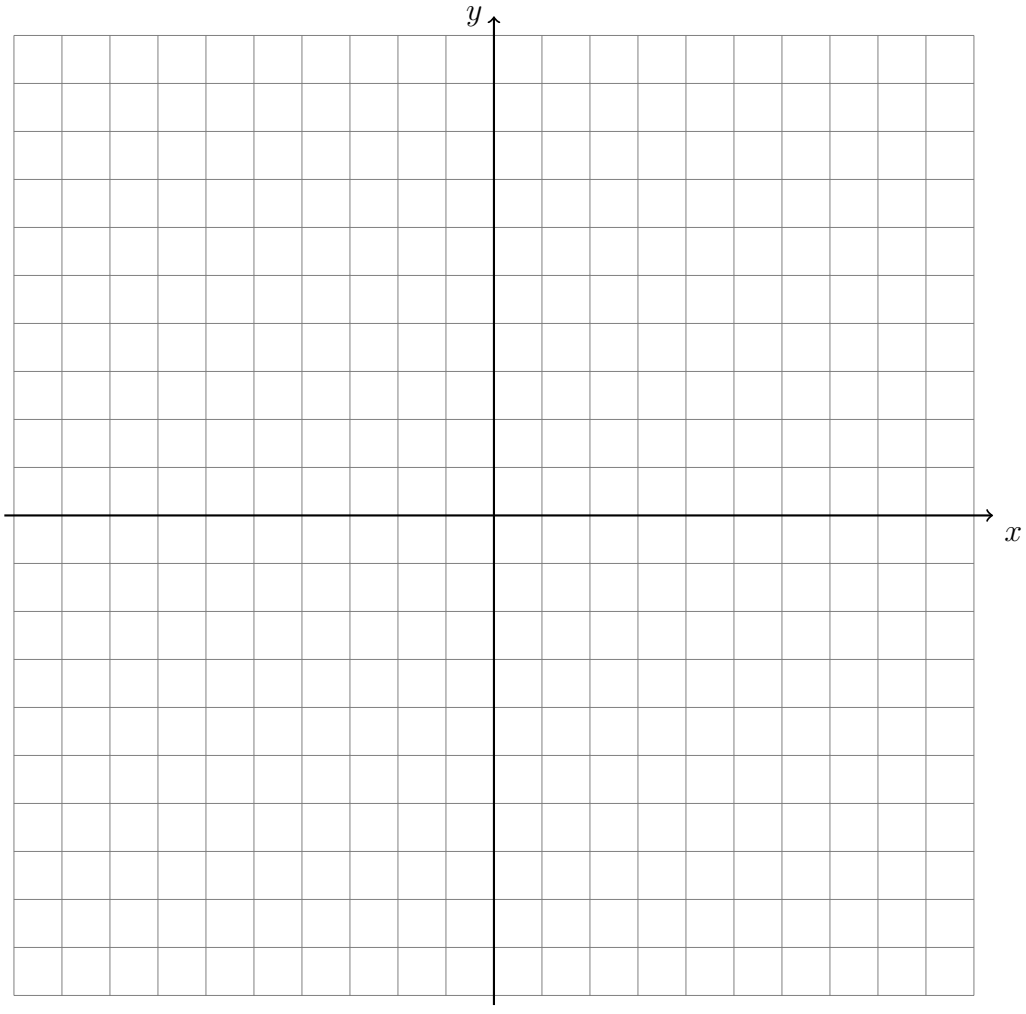


Graphing quadratic functions

4. Given the quadratic function $f(x) = x^2 - 3$, find the row differences.

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

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



5. Graph the two lines after filling in the values in the blanks.

$y = x - 3$

(a) y-intercept $b =$ _____

(b) Slope $m =$ _____

$x + y = 1$

(a) y-intercept $b =$ _____

(b) Slope $m =$ _____

Label both lines and the solution to the system, the intersection, as a coordinate pair. (3 points) Use pencil for graph (1 point)