BECA / Dr. Huson / 10.3 Geometry   Name:
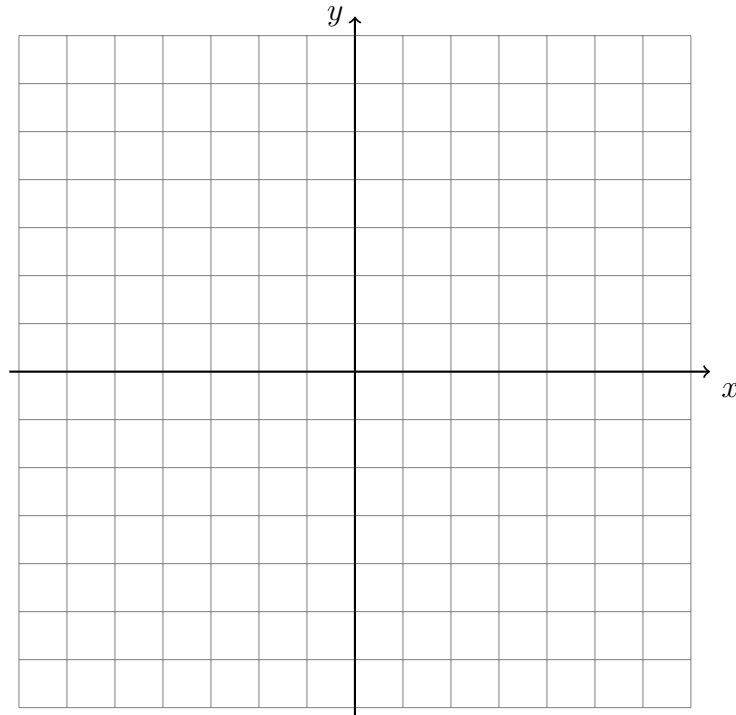30 May 2019

Do Now: Graphing practice

1. Graph the line $y = \frac{1}{3}x - 2$ after filling in the values in the blanks.

   y-intercept = _____

   Slope = _____

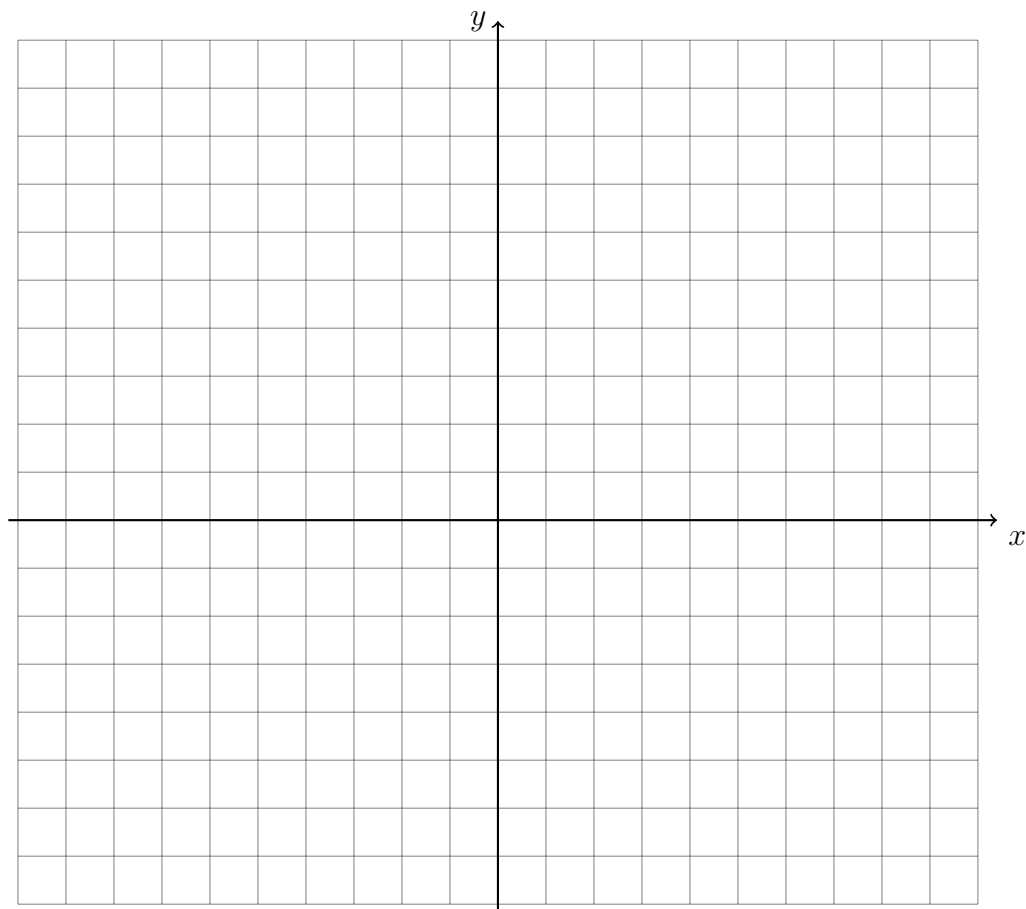In the following two problems, solve for the value of x.

2. $2x - 10 = 4x - 4$ 3. $\frac{2}{3}(3x - 9) = 16$

BECA / Dr. Huson / 10.3 Geometry   Name:
30 May 2019

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

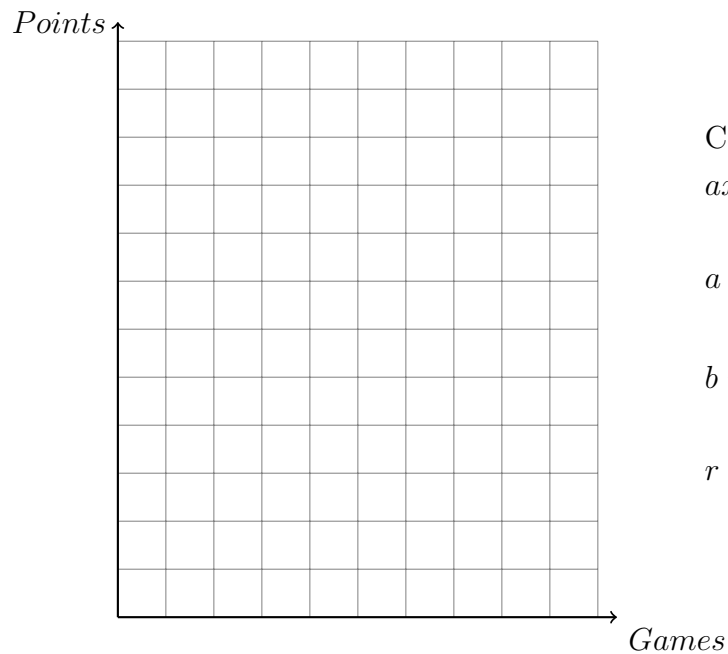$y \geq \frac{1}{2}x + 3$ $-2x + y < 3$

5. Solve each equation for y.

   (a) $-x + 2y = 6$ (a) $2x - y = 5$

BECA / Dr. Huson / 10.3 Geometry   Name:
30 May 2019

Fitting linear models and interpreting correlation

6. Her points scored increased as a player practiced during the year. The table shows how many points were scored at specific games in the season.

Game number	4	6	7	10
Points	23	24	25	32

Points

Calculator
$ax + b$

$a = $ _____

$b = $ _____

$r = $ _____

Games

State, to the *nearest tenth*, the linear regression equation that approximates the points scored versus the game's number.

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

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

BECA / Dr. Huson / 10.3 Geometry   Name: .
30 May 2019

Simplifying polynomials, standard form

7. Simplify the expresion $2x + 4(x - 6) + 2$.

8. Write the expression $2x^3 + 2x^2 - 5x^2 + 2x + 2 + 3x$ as a polynomial in standard form.

9. Write the expression $x + 2x^2(5x - 3) - 7x^2 - 3x$ as a polynomial in standard form.

BECA / Dr. Huson / 10.3 Geometry   Name:
30 May 2019

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 $-3 \leq x \leq 3$.

BECA / Dr. Huson / 10.3 Geometry   Name:
30 May 2019
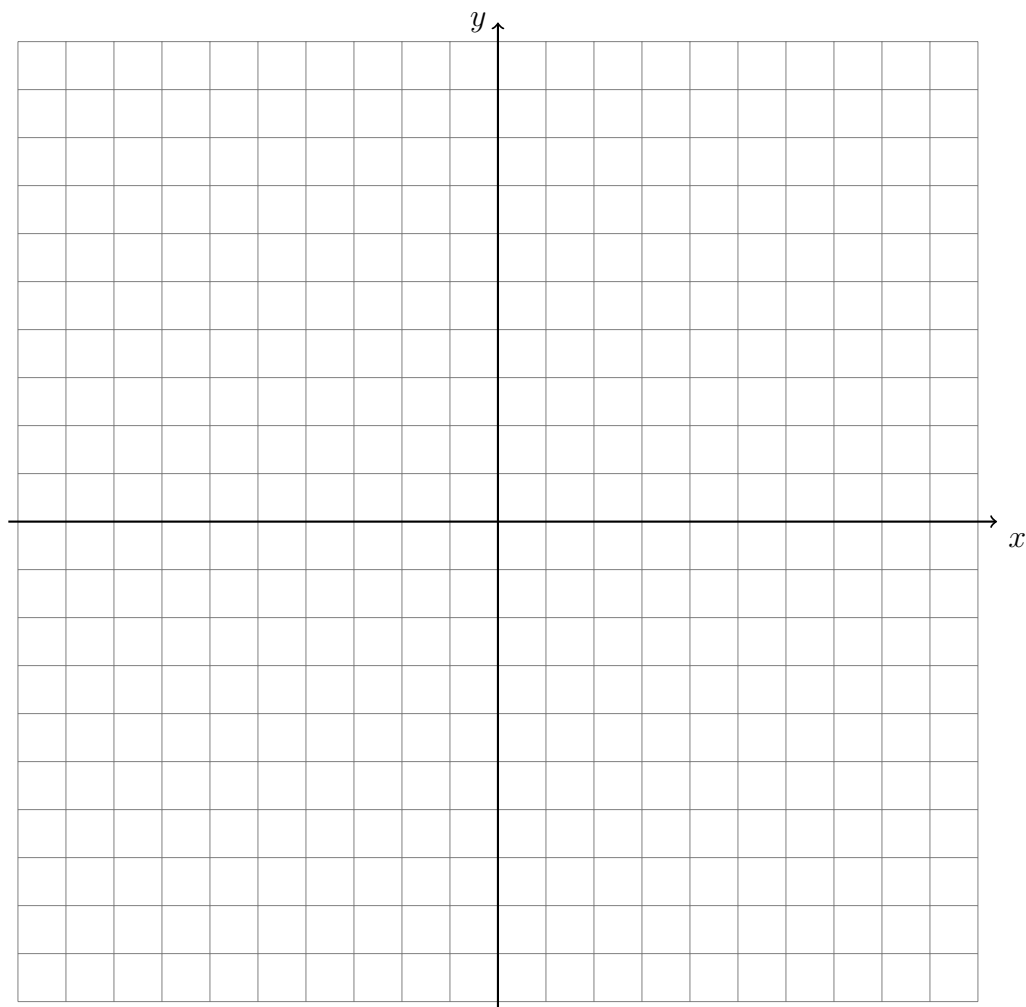
Rate of change

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

(b)

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

Change in $y =$ _____

Change in $x =$ _____

Slope = _____

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)

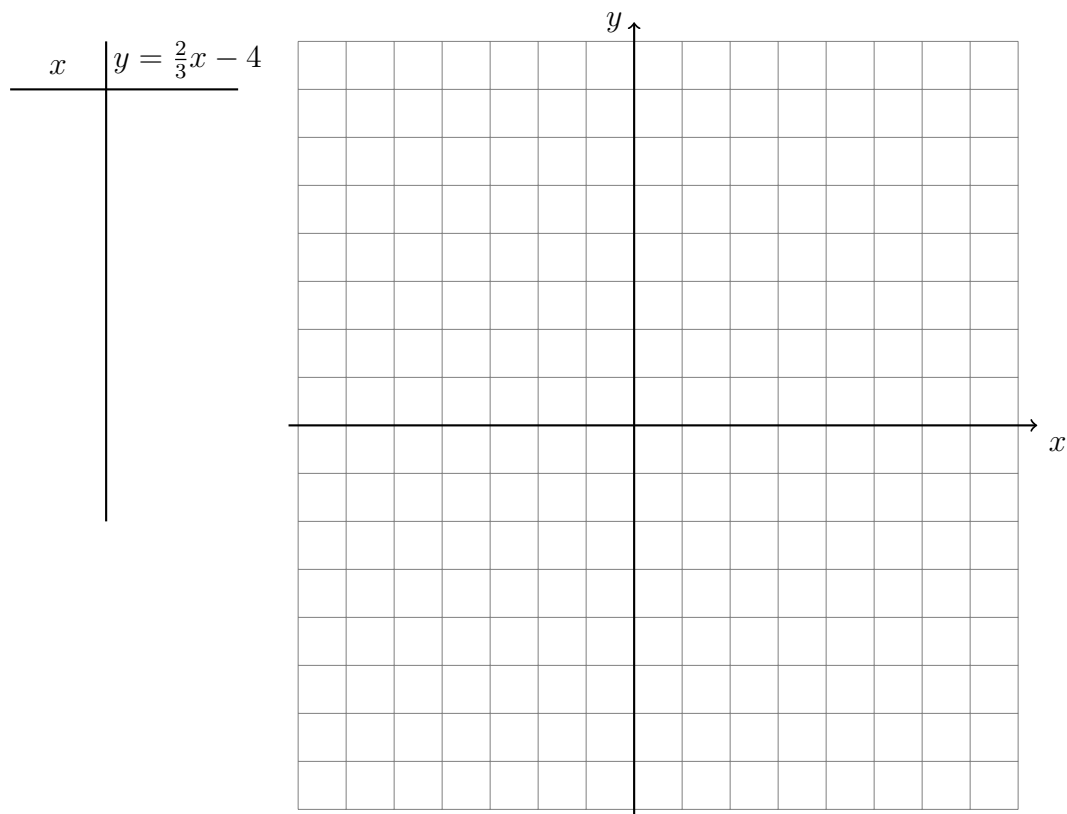| x	$f(x)$
-3	0
-1	2
0	3
1	4
3	6

(b)

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

Slope = _____

Slope = _____

BECA / Dr. Huson / 10.3 Geometry   Name:

30 May 2019

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

x	$y = \frac{2}{3}x - 4$

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

$m =$

$b =$

Circle the row for the y-intercept.