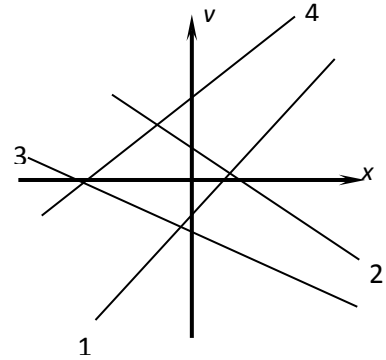


**Algebra 1 CC
Assignment #35
More Work Graphing Linear Functions (Lines)**

1. Four lines are shown graphed. Match the number of the line with the letter of the equation that most appropriately models it.

- a) $y = \frac{2}{3}x + 5$ b) $y = x - 3$
- c) $y = -\frac{3}{4}x + 3$ d) $y = -\frac{1}{2}x - 4$



2. Which of the following is true about the linear function $2y + x = 18$.

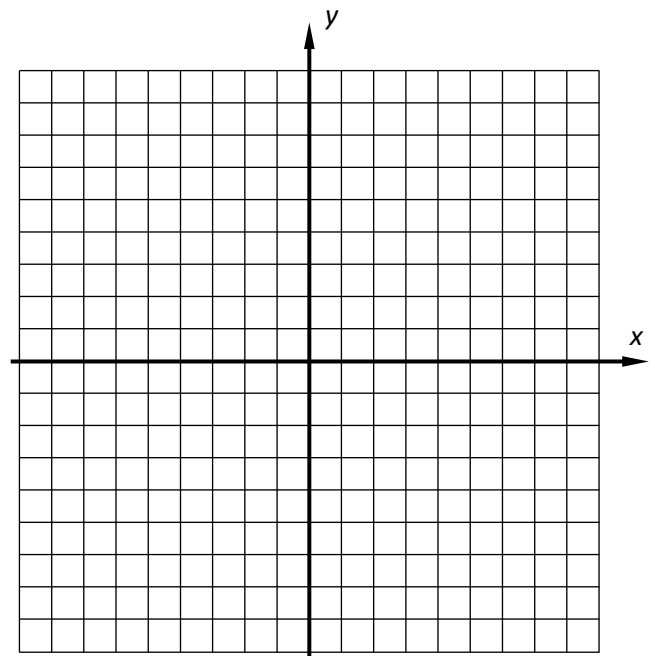
- (1) It has a slope of 2 and a y-intercept of 18.
 (2) It has a slope of -2 and a y-intercept of 9.
 (3) It has a slope of $-\frac{1}{2}$ and a y-intercept of 9.
 (4) It has a slope of $\frac{1}{2}$ and a y-intercept of 18.

3. For the line $2y - 6x = 10$, for every unit increase in x which of the following is true?

- (1) y decreases by 6 (2) y increases by 3 (3) y increases by 2 (4) y decreases by 10

4. Rewrite each of the following linear equations in equivalent $y = mx + b$ (slope-intercept) form. Identify the slope and the y-intercept and then graph on the grid given. Label each line with its original equation.

- (a) $2y - 3x = 10$
- (b) $x + 2y = 6$
- (c) $3y + 12 = 5x$



R1. Anthony just signed up for new phone plan and is comparing his fees to that of his friend Marcus. They both create equations so that they could compare their fees with each other.

Anthony's plan: Monthly cost = $3(.75m+10)+2.50m-15$ where m is the number of minutes used

Marcus's Plan: Monthly cost = $2(1.75m+12.50)-.75m+4$ where m is the number of minutes used

- (a) After how many minutes, will the two plans cost the same?
- (b) Anthony compares his plan to another friend, Brielle's. Given that both Anthony and Brielle will only be charged for full minutes, is there an amount of time when their two plans cost the same? Explain.

Brielle's plan: Monthly cost = $2(1.50m+12)+m-4$ where m is the number of minutes used

R2. State the domain and range of the function: $\{(-1, 0), (-3, 7), (2, 8), (-1, 0)\}$

R3. In the expression $8x^2 - 7$, identify the following, constant, coefficient, variable and exponent.

R4. Write an equation that defines $m(x)$ as a trinomial where $m(x) = (3x - 1)(3 - x) + 4x^2 + 19$

1. a) 4 b) 1 c) 2 d) 3

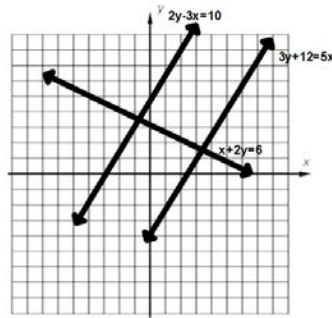
2. (3)

3. (2)

4. (a) $y = \frac{3}{2}x + 5$

(b) $y = -\frac{1}{2}x + 3$

(c) $y = \frac{5}{3}x - 4$



R1. (a) 7 minutes

(b) No because they will be the same at $6.\bar{6}$ minutes which is not a whole minute.

R2. Domain $\{-3, -1, 2\}$

Range $\{0, 7, 8\}$

R3. Constant = -7

Coefficient = 8

Variable = x

Exponent = 2

R4. $m(x) = x^2 + 10x + 16$