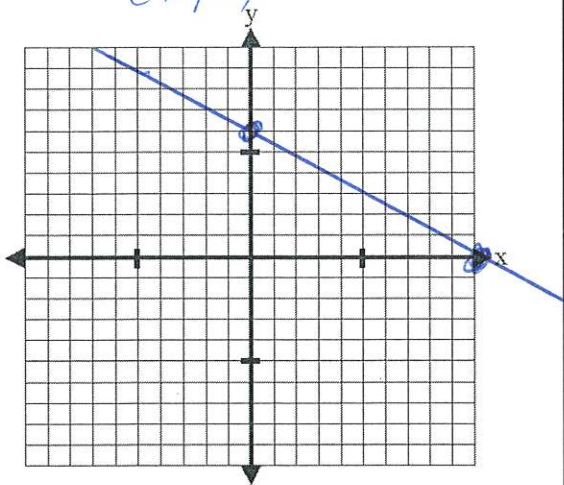


Write an equation in standard form for each situation and then graph it. (*Hint: what form is helpful for graphing?*)

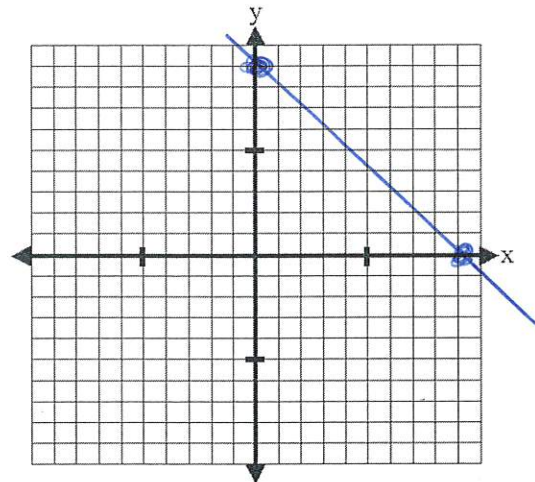
9. You are selling tickets to a winter concert! You sold 3 adult tickets and 5 student tickets, and collected \$30. Write an equation, and then graph it.

Equation: $3x + 5y = 30$
x = adult cost, y = student cost
 (0, 6)
 (10, 0)



10. Shari is also selling tickets to the winter concert. She sells adult tickets and student tickets. She sells a total of 9 tickets. Write an equation, and then graph it.

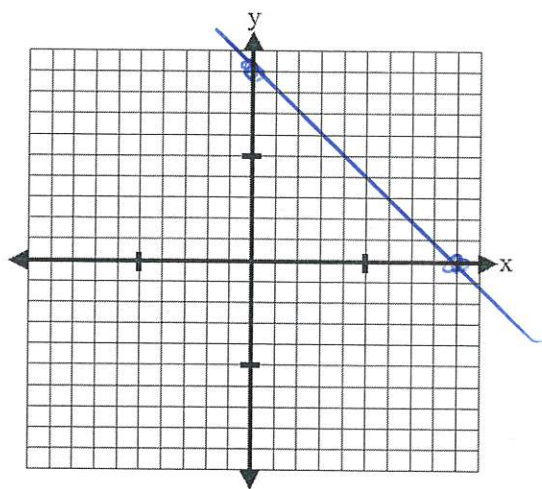
Equation: $x + y = 9$
x = adult number, y = student #



11. The school is selling cookies for a fundraiser. They are selling chocolate chip cookies and fancy decorated sugar cookies with frosting. You only sell a total of 9 cookies. Write an equation, and then graph it.

$x = C.C., y = S.C.$

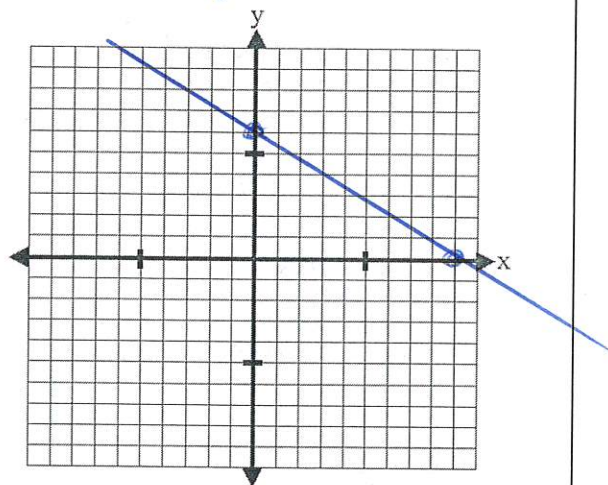
Equation: $x + y = 9$



12. For the fundraiser, each chocolate chip cookie is \$2 and each fancy decorated sugar cookie is \$3. Jordan sells a total of \$18. Write an equation, and then graph it.

$x = C.C., y = S.C.$

Equation: $2x + 3y = 18$
 $(9, 0) \text{ \& } (0, 6)$



Unit 4- Point Slope & Standard Form

Write the slope-intercept form of the equation of each line.

1) $3x - 2y = -16$

$$\begin{aligned} -3x & \quad -3x \\ -2y & = -3x - 16 \\ y & = \frac{3}{2}x + 8 \end{aligned}$$

2) $13x - 11y = -12$

$$\begin{aligned} -11y & = -13x - 12 \\ y & = \frac{13}{11}x + \frac{12}{11} \end{aligned}$$

3) $9x - 7y = -7$

$$\begin{aligned} -7y & = -9x - 7 \\ y & = \frac{9}{7}x + 1 \end{aligned}$$

4) $x - 3y = 6$

$$\begin{aligned} -3y & = -x + 6 \\ y & = \frac{1}{3}x - 2 \end{aligned}$$

5) $6x + 5y = -15$

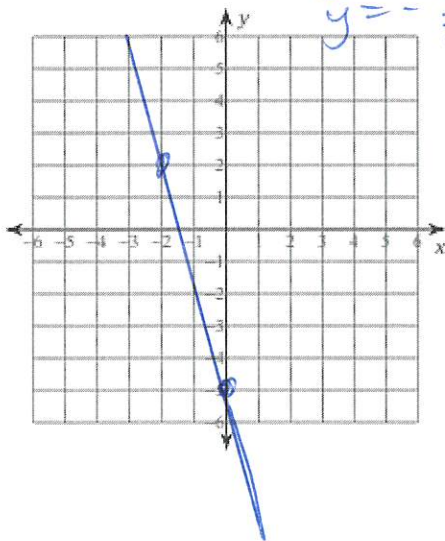
$$\begin{aligned} 5y & = -6x - 15 \\ y & = -\frac{6}{5}x - 3 \end{aligned}$$

6) $4x - y = 1$

$$\begin{aligned} -y & = -4x + 1 \\ y & = 4x - 1 \end{aligned}$$

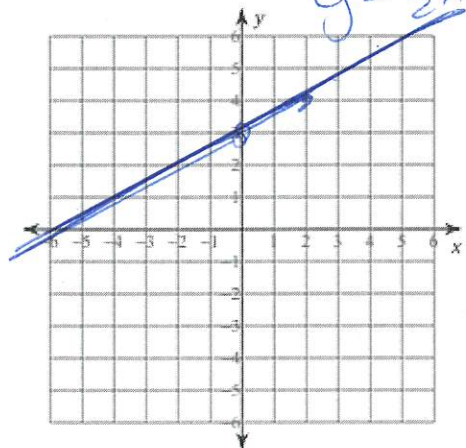
5) $7x + 2y = -10$

$$\begin{aligned} 2y & = -7x - 10 \\ y & = -\frac{7}{2}x - 5 \end{aligned}$$



6) $x - 2y = -6$

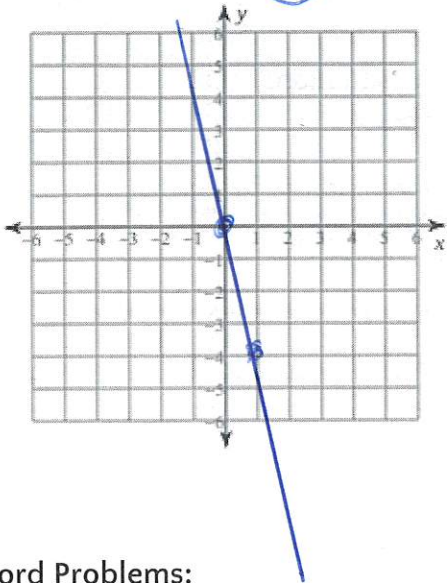
$$\begin{aligned} -2y & = -x - 6 \\ y & = \frac{1}{2}x + 3 \end{aligned}$$



Sketch the graph of each line.

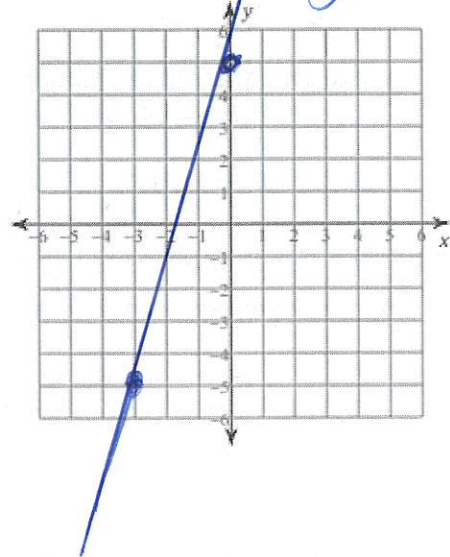
1) $4x + y = 0$

$y = -4x$



2) $10x - 3y = -15$

$-3y = -10x - 15$
 $y = \frac{10}{3}x + 5$



Word Problems:

- 1) A calf weighs 18 lbs. when it is 2 months old, and after 8 months it weighs 36 lbs.

Let x be the calf's age and y be the weight.

- a) Write an equation in slope-intercept form that represents the situation.

$$\frac{36-18}{8-2} = \frac{18}{6} = 3 \text{ lbs per mo.}$$
 So $y = 3x + b$

- b) How much did the calf weigh at birth?

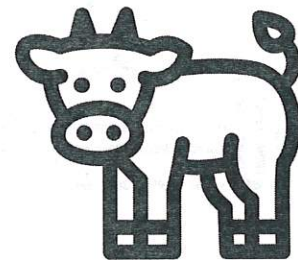
$18 = 3(2) + b$
 $18 = 6 + b$
 $12 = b$ 12 lbs at birth

- c) Approximately how much will the calf weigh when it is 12 months old?

$y = 3(12) + 12$
 $= 36 + 12$
 $= 48 \text{ lbs}$

- d) How much weight did the calf gain each month?

3



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Unit 4- Point Slope & Standard Form

2) A weightlifter uses 45 pound plates and 10 pound plates to lift 260 pounds. Let x represent the number of 45 pound weights and y represent the number of 10 pound weights.



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a) Write an equation in standard form that represents the situation.

$$x = \# \text{ of } 45\text{-lbs}, y = \# \text{ } 10\text{-lbs}$$

$$45x + 10y = 260$$

b) If the weightlifter uses eight 10-pound weights, how many 45 pound weights did he use?

$$45x + 10(8) = 260$$

$$45x + 80 = 260$$

$$45x = 180$$

$$x = 4$$



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