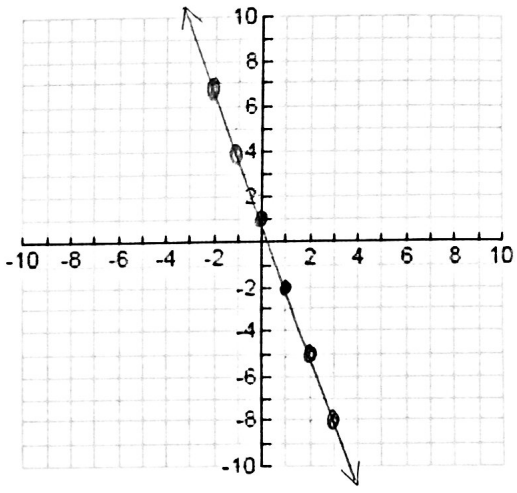
Warm-Up

Algebraic Equation

$$y = -3x + 1$$

Graph



Table

X	Y
-2	7
-1	4
0	1
1	-2
2	-5
4	-8

Create the missing representations of the given linear function.

Day 3 Homework

For each problem below, write an equation in slope-intercept form and answer the question.

1. The cost of renting a jet ski is $40 per day plus $50 per hour of use. How many hours was a jet ski rented if the total cost was $390?

$390 = 40 + 50x$

7 hours

2. When an alligator is born it is about 8 inches long. Each year they grow about 12 inches. Determine how old an alligator is that is 116 inches long.

$116 = 8 + 12x$

9 years old

3. Membership at the Healthy You Gym is a $40 initial fee and $5 a visit. If Sanjaya's bill was $105, how many times had he visited the gym?

$105 = 40 + 5x$

13

4. Membership to a video game club is $50 a year and $3 per game rented. At the end of the year Harvey had spent $296. How many games had he rented?

82 games

$296 = 50 + 3x$

5. Danielle wants to paint a ceramic planter. The total price is the cost of the planter plus an hourly painting rate of $6. Determine how many hours Danielle painted if she spent $9 on the planter and her total bill was $33.

$33 = 9 + 6x$

4 hours

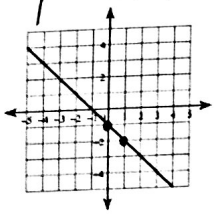
6. Jackson Intermediate School is doing a fund raiser selling magazine subscriptions. The magazine publisher will pay the school a starting bonus of $500 and then $4 for each magazine subscription sold. At the end of the fund raiser the school is paid a total of $1360. How many subscriptions did they sell?

$1360 = 500 + 4x$

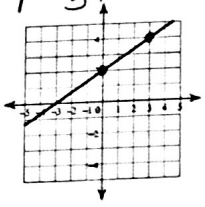
215

Write an equation in slope intercept form for each graph below

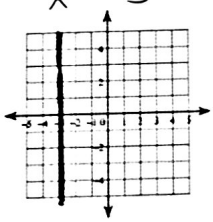
7. $y = -1x - 1$



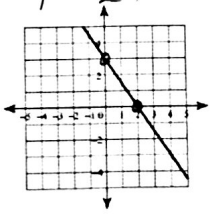
8. $y = \frac{2}{3}x + 2$



9. $x = -3$



10. $y = \frac{-3}{2}x + 3$



11. Write an equation in slope intercept form given the following information

a) $slope = -\frac{3}{4}$ and $y - int: -5$

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

b) $(1, -1)$ & $(4, -5)$

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

c) $2x - 5y = 5$

$y = \frac{2}{5}x - 1$

Day 3 Homework

① $\text{cost} = 40 + 50(\text{hour})$

$390 = 40 + 50h$

$-40 \quad -40$

$\frac{350}{50} = \frac{50h}{50}$

$\boxed{h = 7}$

② $\text{length} = 8 + 12(\text{years})$

$116 = 8 + 12y$

$-8 \quad -8$

$\frac{108}{12} = \frac{12y}{12}$

$\boxed{9 = y}$

③ $\text{bill} = 40 + 5(\text{visit})$

$105 = 40 + 5v$

$-40 \quad -40$

$\frac{65}{5} = \frac{5v}{5}$

$\boxed{13 = v}$

④ $\text{money} = 50 + 3(\text{game})$

$298 = 50 + 3g$

$-50 \quad -50$

$\frac{246}{3} = \frac{3g}{3}$

$\boxed{g = 82}$

⑤ $\text{total} = 9 + 6(\text{hour})$

$33 = 9 + 6h$

$-9 \quad -9$

$\frac{24}{6} = \frac{6h}{6}$

$\boxed{4 = h}$

⑥ $\text{total} = 500 + 4(\text{magazine})$

$13600 = 500 + 4m$

$-500 \quad -500$

$\frac{800}{4} = \frac{4m}{4}$

$\boxed{215 = m}$

⑪ a) $(1, -1) \quad (4, -5)$

$m = \frac{-5 + +1}{4 - 1} = \frac{-4}{3}$

$y = mx + b$

$-1 = \left(\frac{-4}{3}\right)(1) + b$

$-1 = \frac{-4}{3} + b$

$\frac{1}{3} = b$

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

b) $2x - 5y = 5$

$-2x \quad -2x$

$\frac{-5y}{-5} = \frac{-2x}{-5} + \frac{5}{-5}$

$\boxed{y = \frac{2}{5}x - 1}$