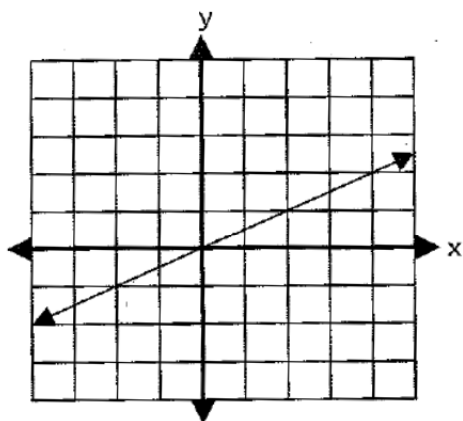


ACTIVITY

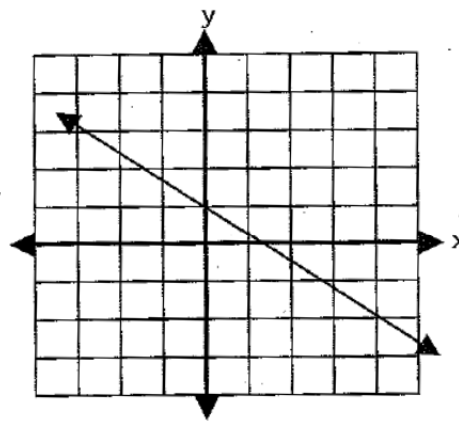
1**WRITE MY EQUATION,
GIVEN A GRAPH**

Write the equation of each graph below in slope-intercept form (except #4.) The scale of each axis is 1.

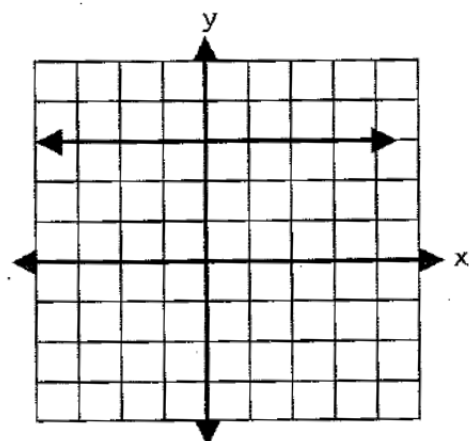
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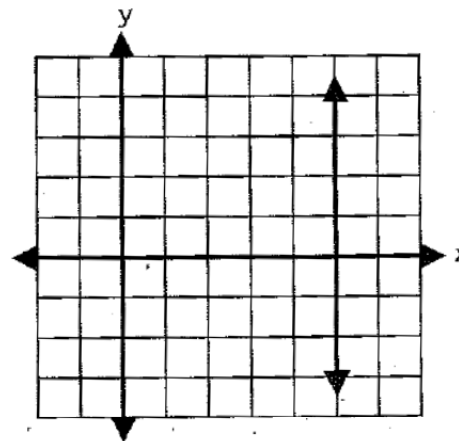
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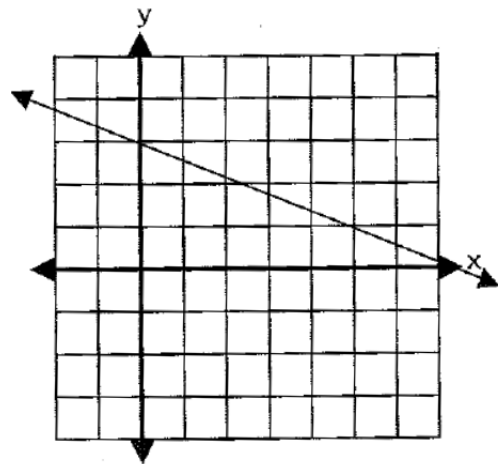
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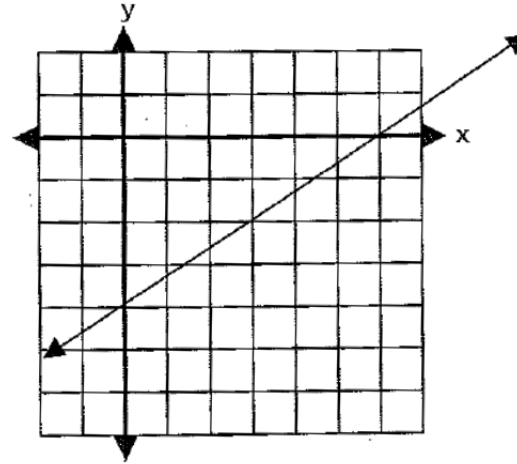
4.



5.



6.



WRITE MY EQUATION, GIVEN A SLOPE AND A Y-INTERCEPT

- 1) Write the equation of the line passing through each point with the given slope in point-slope form.
 - 2) Transform the equation to slope-intercept form.
 - 3) Convert each equation to Standard Form.
- (Exception: #4. For #4, write the equation of the line.)

1. $(3, -4); m = \frac{2}{3}$

2. $(-1, 6); m = -3$

3. $(5, 7); m = 0$

4. $(-2, -7);$ slope is undefined

5. $(-3, 9); m = \frac{-4}{5}$

6. $(8, 3); m = \frac{-5}{3}$

**WRITE THE EQUATION
FROM MY RIDDLE**

Write the equation of the line, given the following information.

1. The line passes through $(-4, 1)$ and has the same slope as the line whose equation is $4x - 3y = 5$.
2. The line passes through $(-3, 7)$ and has the same y-intercept as the line whose equation is $6x - y = 8$.
3. The line has the same slope as the line $x = -5$ and has the same x-intercept as the line whose equation is $3x - 2y = 6$.
4. The line has the same y-intercept as the line whose equation is $7x + 2y = 14$ and the same x-intercept as the line whose equation is $4y + 3x = 6$.

5**LINEAR APPLICATIONS**

For each problem:

- a) Write a linear function that models the problem.**
- b) Answer the questions using your linear model.**

1. Jose is planning a sixteenth birthday party for his friend. The invitations cost \$15, and each invitation will cost \$0.39 to mail.
 - a. Write a linear function if C is the total cost and p is the number of people invited.
 - b. What is the total cost if he invites twenty people?
 - c. How many people can he invite for \$29.04?
2. Jahanna is selling gourmet cookies. She spent \$10 on ingredients to make the cookies. She plans to sell the cookies for fifty cents each.
 - a. Write a linear function for the profit P , when c cookies are sold.
 - b. How much money will Jahanna make if she sells one hundred cookies?
 - c. How many cookies did she sell if her profit was \$32.50?
3. Shelia wants to join the Get Fit Now gym. The membership fee is \$120 and the monthly fee is \$30.
 - a. Write a linear function if C is the total cost and m is the number of months she goes to the gym.
 - b. How many months can she go to the gym for \$870?
 - c. How much would it cost Shelia if she went to the gym for one year?

LINEAR APPLICATIONS

4. Stuart bought a used car at the Nearly New Car store and paid \$15,000. The car depreciates \$620 each year.
 - a. Write a linear function for the value V if he owns the car for y years.
 - b. How many years has he owned his car if the value is \$11,280?
 - c. What is the value of his car after he owns it for ten years?

5. The Moovoo-In Truck Rental Company charges a flat fee of fifty dollars, plus an additional forty cents per mile driven, for renting a moving van.
 - a. Write a linear function for the total cost C to rent a truck that will be driven m miles.
 - b. How many miles can the truck be driven for two hundred twenty-four dollars?
 - c. How much will it cost to rent a moving van if it is driven five hundred miles?

6. The Borrow Now Loan company loans Kaylie eight thousand dollars to purchase a car. Kaylie's monthly payment is two hundred fifteen dollars.
 - a. Write a linear function for the loan balance B for p monthly payments.
 - b. What is the balance of Kaylie's loan after one and one-half years?
 - c. How many payments has Kaylie made if her loan balance is two thousand eight hundred forty dollars?