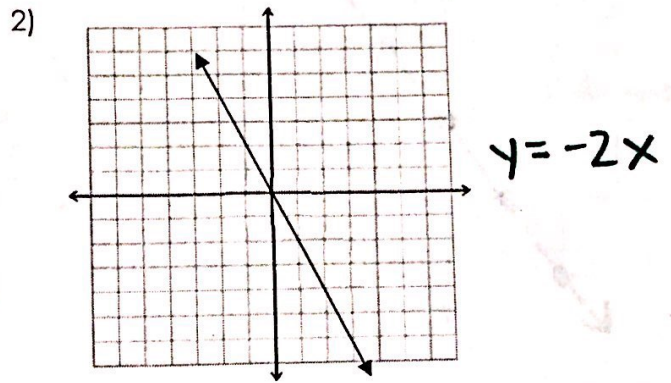
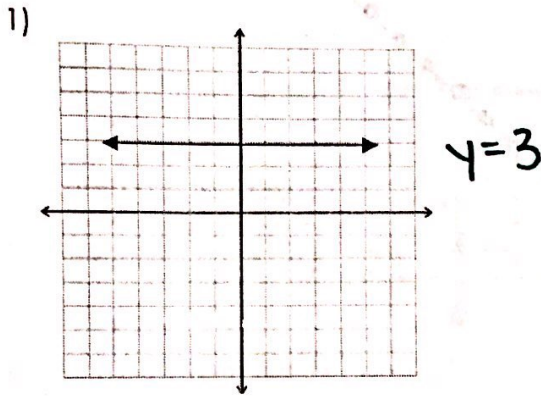


Review Worksheet for Unit 2 Test A

Name \_\_\_\_\_ Date \_\_\_\_\_

Write an equation of the line in  $y = mx + b$  form.



Write an equation in slope-intercept form.

3)  $m = 4$  and  $b = -5$

$$y = 4x - 5$$

4) passes through  $(0, -1)$  and  $(2, -1)$

$$y = -1$$

5) slope = 2, passes through  $(5, 2)$

$$y = 2x - 8$$

6) slope of 2,  $y$ -intercept of 0

$$y = 2x$$

7) passes through  $(-2, -9)$  and  $(2, 4)$

$$y = \frac{13}{4}x - \frac{5}{2} \text{ or } y = 3.25x - 2.5$$

8) passes through  $(-2, 7)$  and  $(-2, 1)$

$$x = -2$$

Write the equation in slope intercept form for the table.

9)

x	y
0	0
1	2.5
2	5
3	7.5
4	10

$$y = 2.5x$$

10)

x	y
0	3
1	-1
2	-5
3	-9
4	-13

$$y = -4x + 3$$

11)

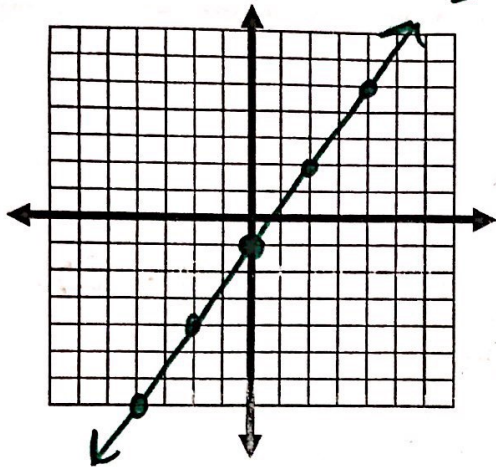
x	y
1	1
2	5
3	9
4	13
5	17

$$y = 4x - 3$$

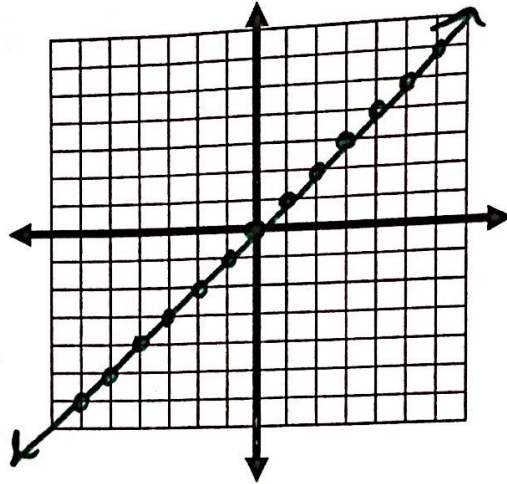
Identify the slope and the y-intercept and then graph the line.

12)  $-3x + 2y = -2$

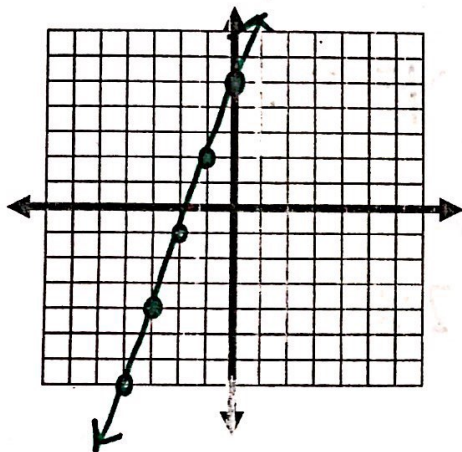
$y = \frac{3}{2}x - 1$



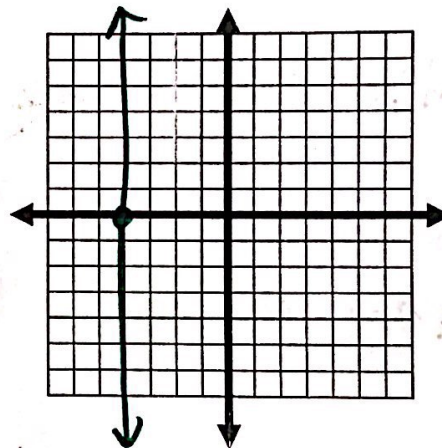
13)  $y = x$



14)  $y = 3x + 5$



15)  $x = -4$



Write an equation and use it to solve the following word problems.

16) The sum of two numbers is 84. The larger of the two numbers is 12 more than three times the smaller number. Find the two numbers.

$x + 3x + 12 = 84$

$4x + 12 = 84$

$18 \ \& \ 66$

17) The perimeter of a rectangle is 114 feet. Its length is three more than twice its width. Find the dimensions of the rectangle.

$2x + 3$

$2x + 3 + 2x + 3 + x + x = 114$

$6x + 6 = 114$

length: 39ft  
width: 18ft

18) Find three consecutive odd integers whose sum is 249.

$x + x + 2 + x + 4 = 249$

$3x + 6 = 249$

$81, 83, 85$



19) Rod is paid an overtime rate of \$25 per hour after his basic wage of \$600 per week. Write an equation in slope-intercept form for the total pay  $p$  if he works  $h$  hour of overtime. What would Rod get paid if he works 10 hours of overtime?

$$y = 25x + 600 \quad y = \$850$$

20) A plumber charges a fee of \$50 to make a house call. He also charges \$25 an hour for labor. Write an equation that you could use to find the amount a plumber charges for a house call based on the number of hours of labor. Let  $x$  represent the number of hours for labor and  $y$  represent the total cost. What would the plumber make if he worked 5 hours on a house?

$$y = 25x + 50 \quad y = \$175$$

Solve for the indicated variable.

21) Solve for  $h$ :  $V = \frac{1}{3}Bh$

$$\frac{3V}{B} = h$$

22) Solve for  $t$ :  $d = rt$

$$t = \frac{d}{r}$$

23) Solve for  $L$ :  $P = 2W + 2L$

$$L = \frac{P}{2} - W$$

24) Solve for  $x$ :  $y = 25x - 30$

$$x = \frac{y}{25} + \frac{6}{5}$$

Algebraic Proofs. Solve the equation and give a reason for each step.

25)

Equation	Steps
$2(4x + 6) = 8$	GIVEN
$8x + 12 = 8$	Distributive Property
$8x = -4$	Subtraction POE
$x = -\frac{1}{2}$	DIVISION POE

26)

Equation	Steps
$5 = \frac{x+2}{3}$	GIVEN
$15 = x+2$	Multiplication POE
$13 = x$	Subtraction POE
$x = 13$	Symmetric POE

27)

Equation	Steps
$8 + x - 2 = 3x + 11 - x$	GIVEN
$6 + x = 2x + 11$	combine like terms
$6 = x + 11$	Subtraction POE
$-5 = x$	Subtraction POE
$x = -5$	Symmetric POE

Solve the equation or inequality.

28)  $\frac{2}{3}x - 7 = -1$

$x = 9$

29)  $-3x + 2 > 8$

$x < -2$