

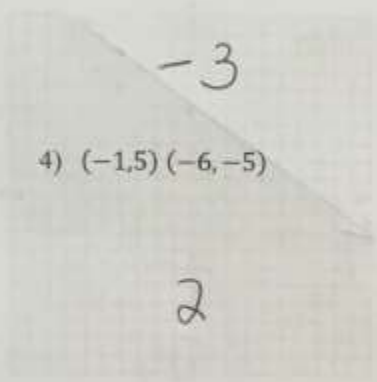
Name _____
Date _____ Hour _____

UNIT REVIEW

Read and follow all of the directions to help prepare for the test.
Find Slope.

1)

x	y
1	4
3	-2
5	-8



2) (4,1) (-7,1)

0

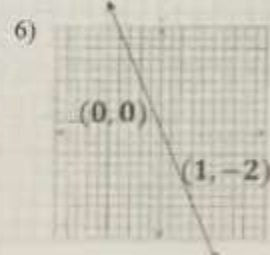
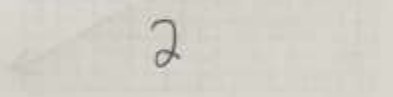
3) (14,3) (14,-5)

undefined

4) (-1,5) (-6,-5)



5) (-4,-8) (4,8)

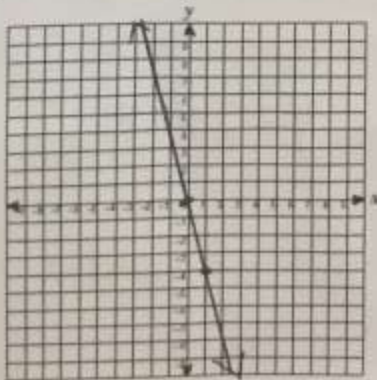


-2

Graph the following equations.

7) $y = -4x$

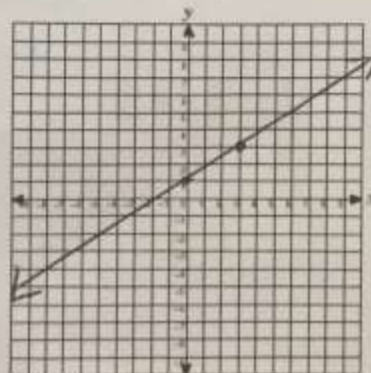
Slope: -4
y-intercept: (0,0)



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

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

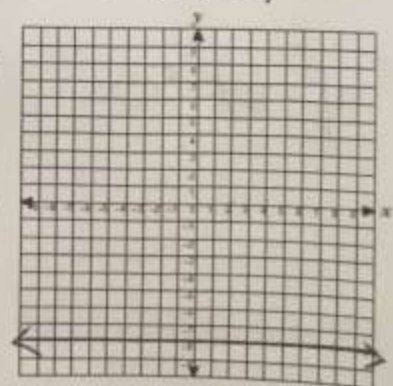
Slope: $\frac{2}{3}$
y-intercept: (0,1)



9) $y + 8 = 0$

$y = -8$

Slope: 0
y-intercept: (0,-8)

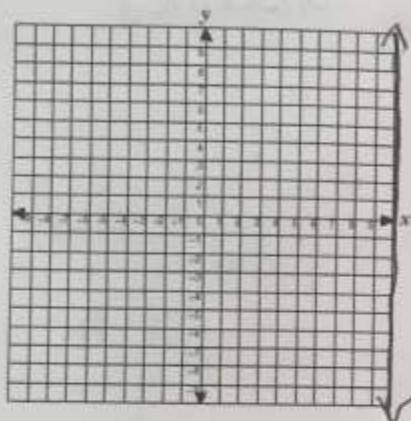


$$10) x - 10 = 0$$

$$x = 10$$

Slope:

x-intercept:

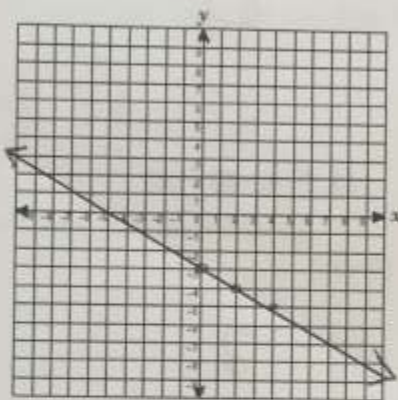


$$11) -5x - 10y = 30$$

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

Slope:

y-intercept:

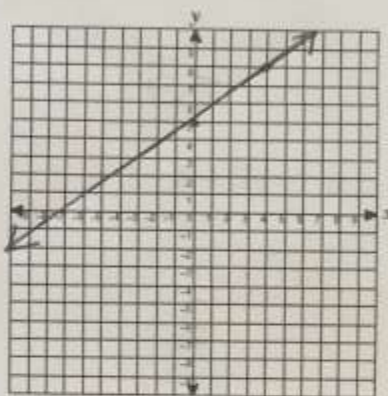


$$12) y - 2 = \frac{3}{4}(x + 4)$$

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

Slope:

y-intercept:



Write an equation in slope-intercept form given the information.

13) $(0, 8)$ $m = -1$

$$y = -x + 8$$

14) $(-10, 4)$ $m = -2$

$$y = -2x - 16$$

15) $(10, -20)$ $m = \frac{2}{5}$

$$y = \frac{2}{5}x - 24$$

16) $(-7, 8)$ $(-6, 14)$

$$y = 6x + 50$$

17) $(-2, 9)$ $(4, -3)$

$$y = -2x + 5$$

18) $(6, -2)$ $(2, -4)$

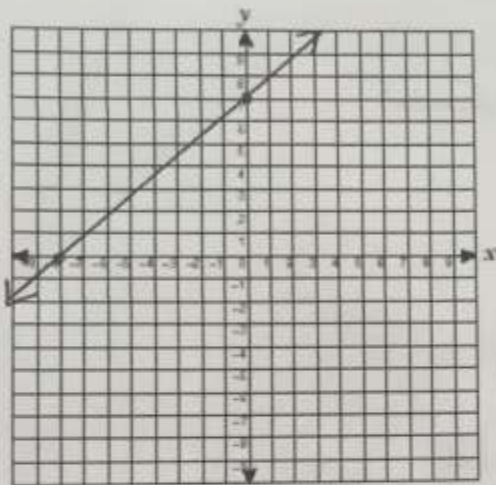
$$y = \frac{1}{2}x - 5$$

Graph the equation using intercepts.

19) $-7x + 8y = 56$

x-int: $(-8, 0)$

y-int: $(0, 7)$

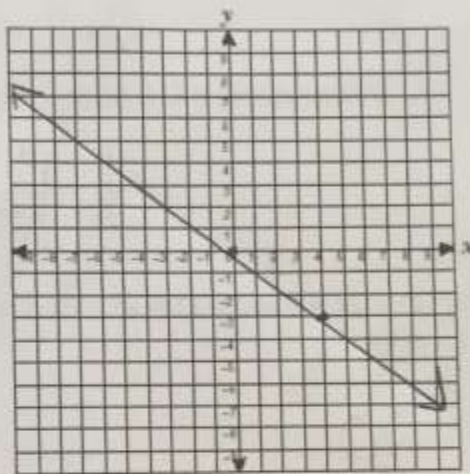


20) $3x + 4y = 0$

x-int: $(0, 0)$

y-int: $(0, 0)$

$m = -\frac{3}{4}$



- 21) Write the slope-intercept equation of the line that is parallel to $y = -2x + 7$ and passes through the point $(3, 8)$.

$y = -2x + 14$

- 22) Write the slope-intercept equation of the line that is perpendicular to $y = -2x + 3$ and passes through the point $(4, -6)$.

$y = \frac{1}{2}x - 8$

- 23) Determine if the lines are parallel, perpendicular or neither. Explain your answer:

$7y = 14x + 21$
 $-3y + 6x = -12$

Parallel

- 24) What is the slope of any horizontal line? Give an example of a horizontal line and write an equation for it.

$m = 0$

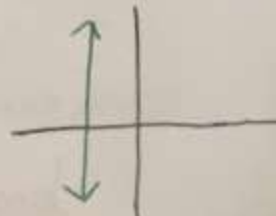
$y = 5$



- 25) What is the slope of any vertical line? Give an example of a vertical line and write an equation for it.

$m = \text{undefined}$

$x = -3$



26) A skating rink charges \$4.25 to rent a pair of skates plus \$1.50 per hour.

- a. Write a linear equation to compute the total cost, y , of skating x number of hours.

$$y = 1.50x + 4.25$$

- b. Use the equation to find the total cost to skate for 6 hours.

$$\$13.25$$

- c. If your total bill is \$10.25, how many hours did you skate for?

$$4 \text{ Hours}$$

27) If $f(x) = 2x + 8$ and $g(x) = x^2 - 6x$, find the following:

a. $f(6)$

$$20$$

b. $g(-2)$

$$16$$

c. $f(d-2)$

$$2d + 4$$

d. $f(g(1))$

$$-2$$

28) James just received a \$40 paycheck from his new job. He spends some of it buying music online and saves the rest in a bank account. His savings is given by $F(m) = 40 - 1.25m$, where m is the number of songs he downloads at \$1.25 per song.

- a.) How many songs can James buy if he wants to save \$30?

$$8 \text{ songs}$$

- b.) Using this scenario from above, what does $F(5)$ represent?

$$\text{James downloaded 5 songs.}$$