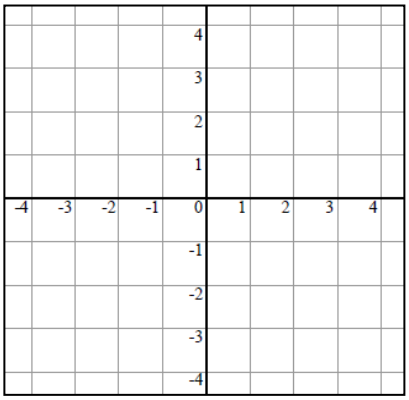
Honors Algebra 1 Chapter 2 Test

Name: _____ Date:_____Hour: _____ Score _____/58

Graph the linear equation using a table. (2 points)

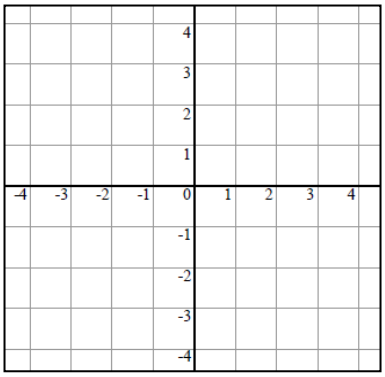
1. **y = -x + 3**

x	y = -x + 3	y	(x,y)
-1			
0			
1			



Graph and describe the slope. (1.5 points)

2. Graph **x = 1**

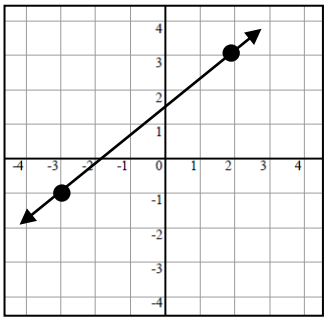


Slope is: (circle one)

positive negative zero undefined

Describe and find the slope of the line. (1.5 points each)

3.



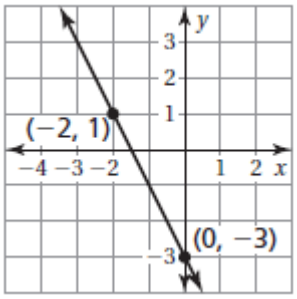
a. Slope is: (circle one)

positive negative zero undefined

b. Find the slope by <u>counting</u>.

Slope = _____

4.



a. Slope is: (circle one)

positive negative zero undefined

b. Find the slope by using slope formula.

Slope =

Find slope from two points. (2 points)

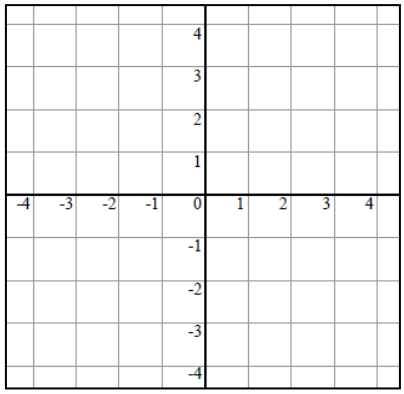
5. (10, 4), (4, 15)

Slope =_____

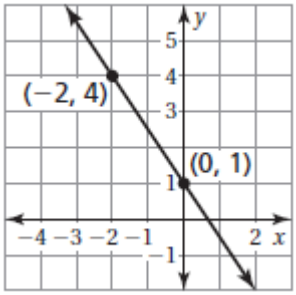
Graph the linear equation using the slope and the y-intercept. (2 points each)

6. Graph $\mathbf{y = \frac{-5}{3}x + 3}$

Slope _____ y-intercept _____



7. Write an equation of the line in slope intercept form. (2.5 points)



Slope_____

y-intercept_____

Equation of the line_____

8. Circle the equation that is **NOT** a linear equation (1 point)

$y = 0.5x - 2$ $4x + 3 = y$ $y = x^2 + 6$ $y = 2$

9. Write an equation in **slope-intercept form** that passes through the following points: (3 points)

(3, 5) and (-3, -7)

Equation _____

10. Write an equation of a line in **slope-intercept form** through: Point (3, 5), slope = $\frac{4}{3}$ (3 points)

Equation _____

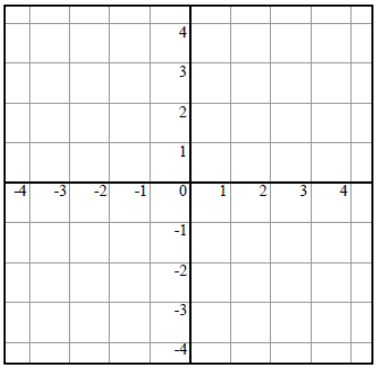
11. A stock is worth $21. Its value is increasing at a rate of $0.25 per week. (2 points)

a. Write an equation for the value *y* (in dollars) of the stock after *x* weeks.

b. What is the value of the stock after 6 week?

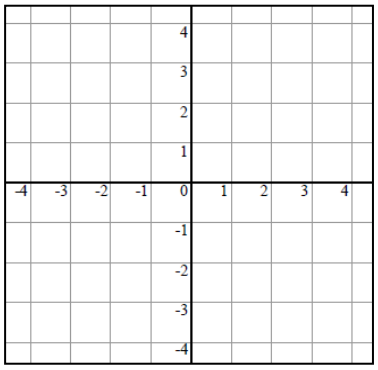
Graph the linear equation using the x and y intercepts (3 points)

12. $4x - 2y = 4$



x-intercept_____ y-intercept _____

Graph linear equations by rewriting in **Slope-Intercept Form**. (2 points)



13. $-x + 3y = 9$

Slope-intercept form _____

Write an equation of the line in **point-slope form** that passes through the given point and has the given slope.

(2 points)

14. (-2, -3), $m = \frac{1}{2}$ Equation _____

Write an equation of the line in **point-slope form** that passes through the given points. (2 points)

15. (2, 10), (-3, -5)

Slope = Equation _____

Write the equation of the line described. (3 points each)

16. through (-6, 10), **parallel** to $y = 2x + 9$

Point-slope form_____

Slope-Intercept_____

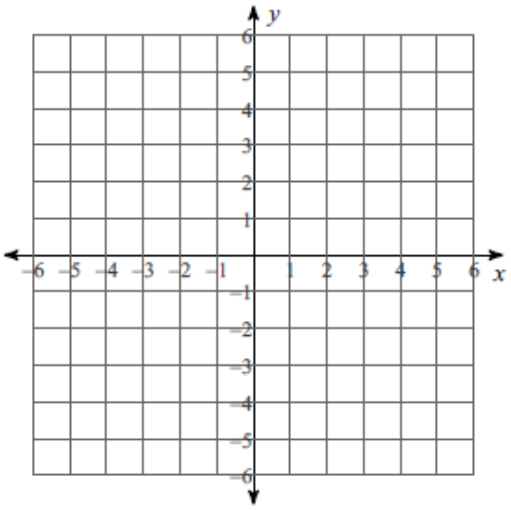
17. through (8, -2), **perpendicular** to $y = 4x - 11$

Point-slope form_____

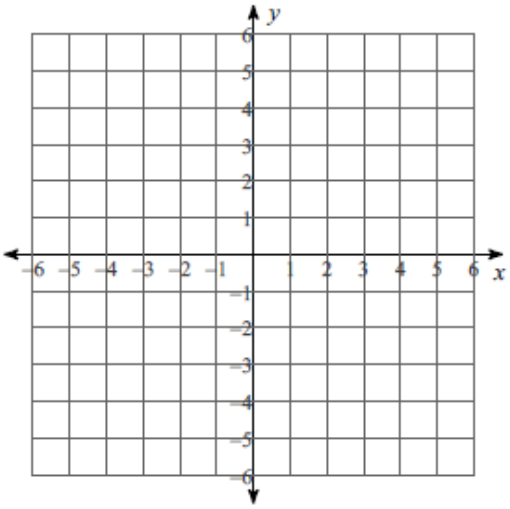
Slope-Intercept_____

Sketch the graph of each linear inequality. (2 points each)

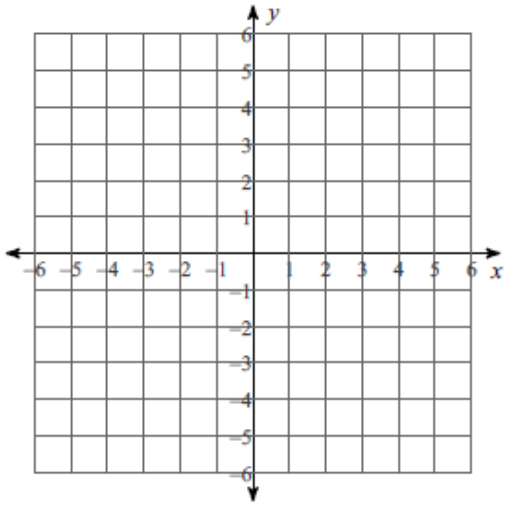
1) $y \geq -3x - 2$



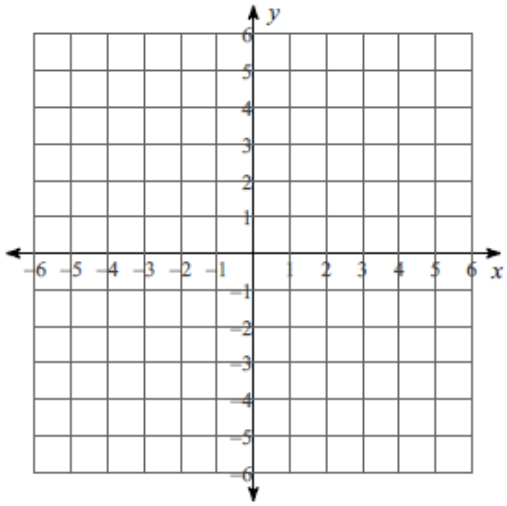
2) $y > \frac{1}{2}x - 3$



3) $x > -5$



4) $3x + 2y \leq 6$

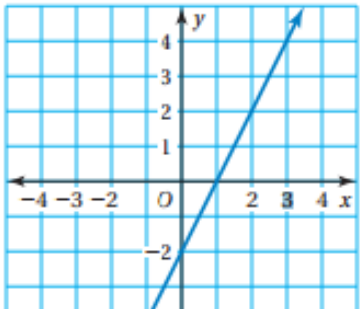


Identify the slope of the line <u>parallel</u> and <u>perpendicular</u>. (2 points each)

22. A line <u>perpendicular</u> to **y = 2** is _____.

A. $y = -\frac{1}{2}$ B. y = 0 C. $y = 2x - \frac{1}{2}$ D. x = 1

23. Which equation matches the line shown in the graph?



A. y = 2x – 2 C. y = 2x + 1

B. y = x – 2 D. y = x + 1

24. What value of x makes the equation below true?

$$5x + 9 = x + 20$$

A. 7.25 C. 2.75

B. 5.8 D. 2.2

25. What could be the first step to solve the equation shown below?

$3x + 5 = 2(x + 7)$

A. Combine 3x and 5. C. Subtract x from 3x.

B. Multiply x by 2 and 7 by 2. D. Subtract 5 from 7.

Vocabulary

Fill in the blank. Choose from the box below. (1 point each)

26. A _____ is an equation whose graph is a **line**.

27. The **y- intercept** is the y-coordinate of the point where the line crosses the _____.

28. _____ lines are two lines that intersect to form **right angles**.

29. **Parallel** lines are two different lines in the same plane that never _____.

30. _____ is a measure of the steepness of a line.

31. The **slope-intercept form** of a linear equation is _____.

32. The **standard form** of a linear equation is _____

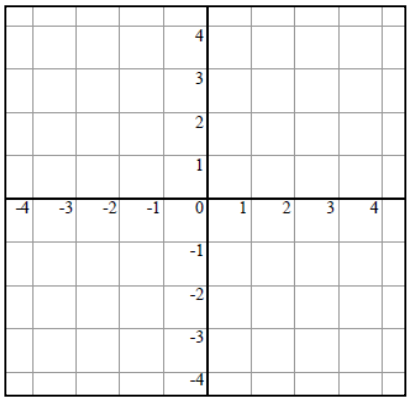
Honors Algebra 1 Chapter 2 Test RETAKE

Name: _____ Date:_____ Hour: _____ Score _____/58

Graph the linear equation using a table. (2 points)

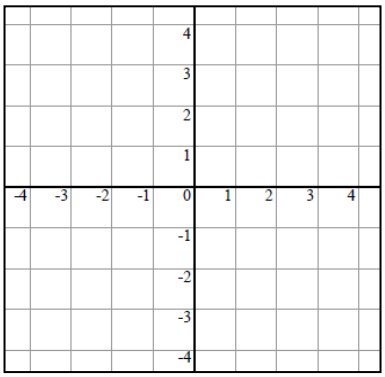
1. y = -2x + 1

x	y = -2x + 1	y	(x,y)
-1			
0			
1			



Graph and describe the slope. (1.5 points)

2. Graph y = **2**

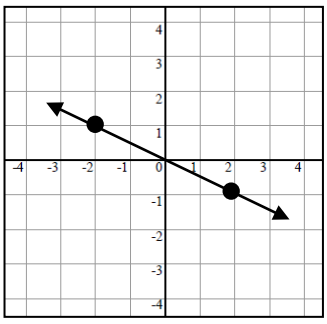


Slope is: (circle one)

positive negative zero undefined

Describe and find the slope of the line. (1.5 points each)

3.



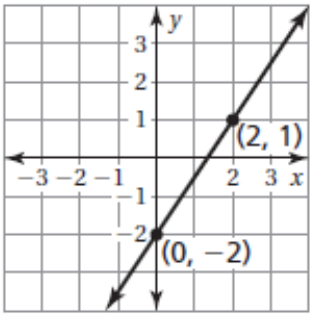
c. Slope is: (circle one)

positive negative zero undefined

b. Find the slope by <u>counting</u>.

Slope = _____

4.



c. Slope is: (circle one)

positive **negative** **zero** **undefined**

d. Find the slope by using slope formula.

Slope =

Find slope from two points. (2 points)

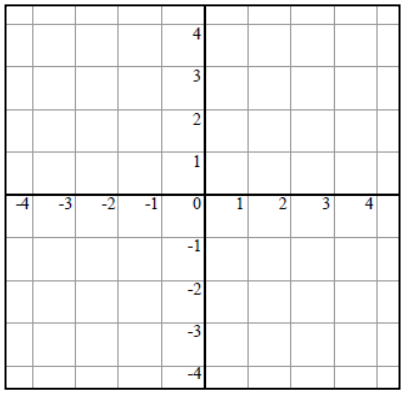
5. **(11, 6), (5, 14)**

Slope =

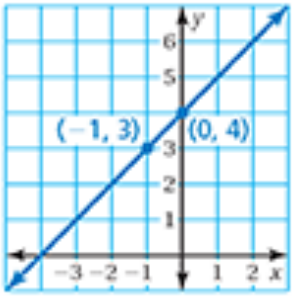
Graph the linear equation using the slope and the y-intercept. (2 points)

6. Graph $\mathbf{y = \frac{1}{2}x - 1}$

Slope _____ y-intercept _____



7. Write an equation of the line in slope intercept form. (2.5 points)



Slope_____

y-intercept_____

Equation of the line_____

8. Circle the equation that **is** a linear equation (1 point)

$y = 0.5x^4 - 2$ $4x + 3z = y$ $3x + 2y = 12$ $y = \frac{2}{x} + 3$

9. Write an equation in **slope-intercept form** that passes through the following points: (3 points)

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

Equation _____

10. Write an equation of a line in **slope-intercept form** through: Point (-2, 6), slope = 2 (3 points)

Equation _____

11. An airplane 30,000 feet above the ground is *descending* at a rate of 2000 feet per minute.
    a) Write an equation that represents the plane's height above the ground, y based on the number of minutes it has been descending, x. (2 points)

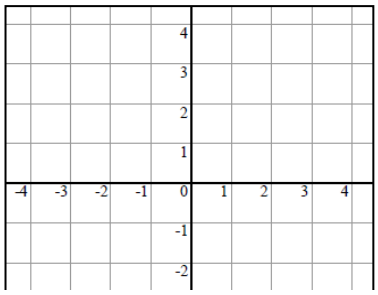
    Equation: _____

    b) Find the plane's height if it has been descending for 7 minutes.

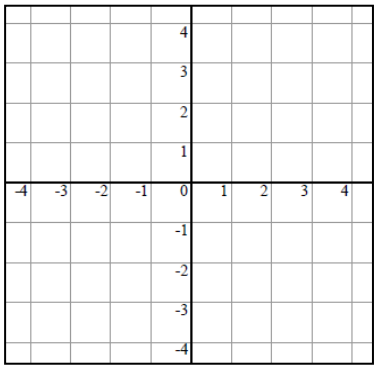
12. Graph the linear equation using the x and y intercepts (3 points)

3x + 2y = 6

x-intercept_____ y-intercept _____



Graph linear equations by rewriting in Slope-Intercept Form. (2 points)



13. $2x + 3y = -3$

Slope-intercept form _____

Write an equation of the line in **point-slope form** that passes through the given point and has the given slope.

(2 points)

14. (5, 4), m = 7 Equation _____

Write an equation of the line in **point-slope form** that passes through the given points. (2 points)

15. (4, 12), (-5, -10)

Slope = Equation _____

Write the equation of the line described. (3 points each)

16. through (6, -10), **parallel** to $y = 3x + 9$

Point-slope form_____

Slope-Intercept_____

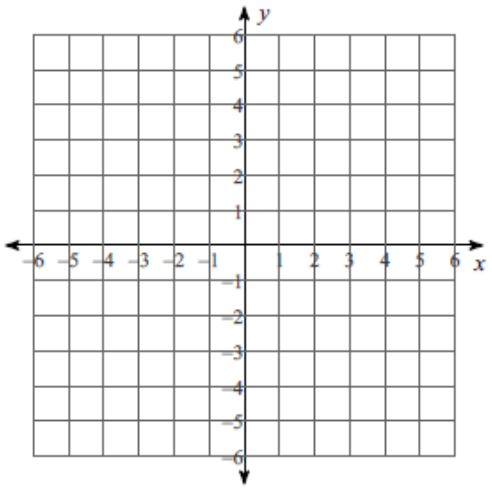
17. through (-7, 4), **perpendicular** to $y = -5x - 11$

Point-slope form_____

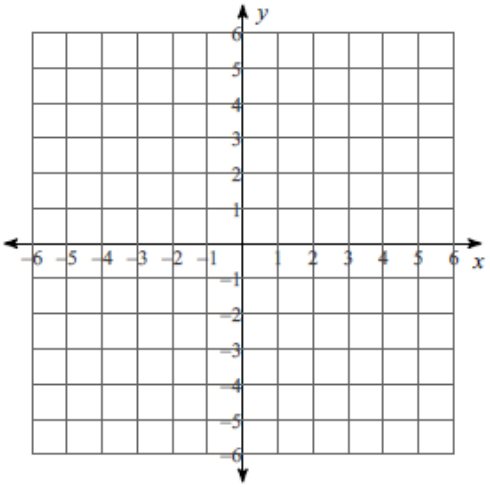
Slope-Intercept_____

Sketch the graph of each linear inequality. (2 points each)

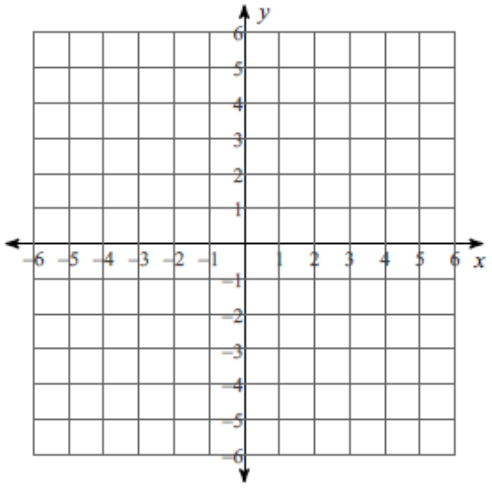
1) $y < -2x + 1$



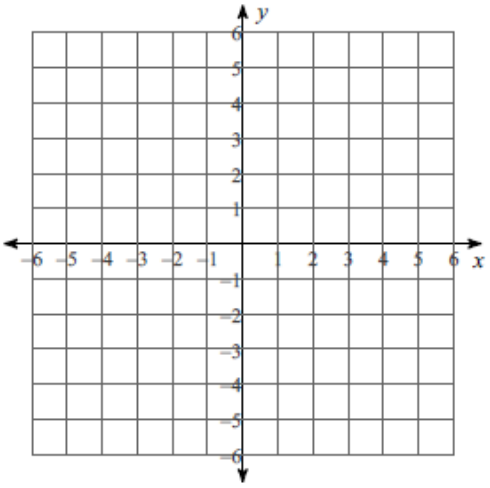
2) $y \leq \frac{3}{4}x - 5$



3) $y < 5$



4) $x - y > 2$



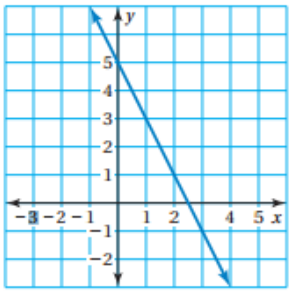
23. Which of the following statements is true? (2 points)

A. The x-intercept is 5.

B. The x-intercept is 2.

C. The y-intercept is 5.

D. The y-intercept is 2.



24. Which value of x makes the equation below true? (2 points)

7 + 2x = 4x − 5

A. − 2 C. 2

B. 1 D. 6

25. Solve **−8x − x + 5 = −6x + 5 − 3x** (2 points)

A. x = 0 C. Infinitely many solutions

B. x = 5 D. No solution

Vocabulary

Fill in the blank. (1 point each)

26. A linear equation is an equation whose graph is a _____.

27. The **x-intercept** is the x-coordinate of the point where the line crosses the _____.

28. The Point-slope form of a linear equation is _____.

29. _____ lines are two different lines in the same plane that **never intersect**.

30. The _____ **form** of a linear equation is y = mx + b.

31. _____ is a measure of the steepness of a line.

32. Perpendicular lines are two lines that intersect to form _____ **angle.**