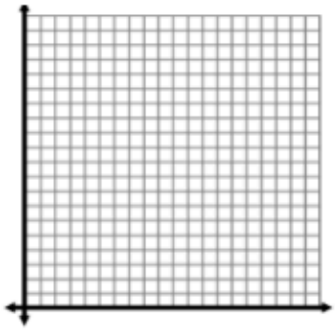
6.6 Use Linear Equations in Slope-Intercept Form

NOTES

Write your questions here!

VERBAL: Mr. Brust's Algebra packets are wicked long. Sully grabs the third packet Brust did and notices its 4.25 pages long. He estimates that every 4 packets Mr. Brust makes the length increases by about a page.

LABEL (units)	LABEL (units)



Write the rule:

Initial Value:

Rate of Change:

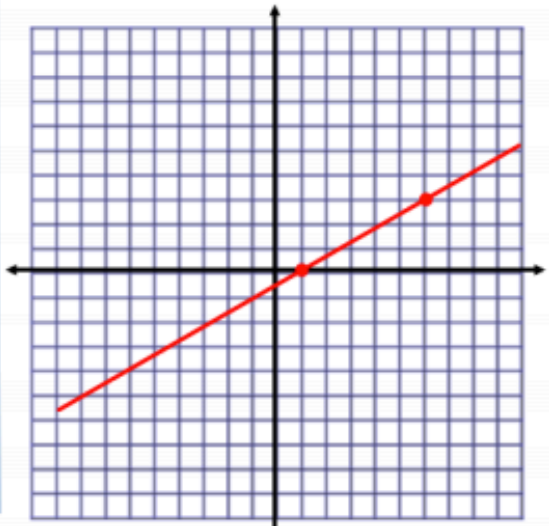
Ex #1: Write an equation of the line that passes through the given point and has the given slope.

(5,1); m=2

Ex #2: Write an equation of the line that passes through the given points.

(3,2), (4, 9)

Ex #3: Write an equation of the line shown.



Ex #4: Mr. Sullivan planted a Buckeye tree in honor of them winning the national championship. After 4 years it had grown to be 12 feet tall. After 8 years of growing it had grown to be 18 feet tall.

a) Write an equation of the line the models the growth of Mr. Sullivan's Buckeye tree.

b) How tall was the tree when Mr. Sullivan planted it?

Now, summarize your notes here!

SUMMARY:

6.6 Use Linear Equations in Slope-Intercept Form

PRACTICE

Write an equation of the line that passes the given point and has the given slope.

1.	a) (1, 1), m = 3	b) (-4, 7), m = -5
2.	a) (8, -4), m = $-\frac{3}{4}$	b) (-3, -1), m = $\frac{1}{6}$
3.	a) (6, 2), m = 0	b) (-2, -3), undefined

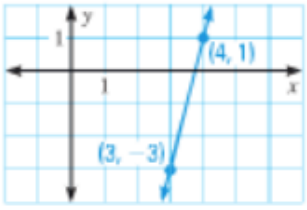
4) Describe and correct the error in finding the y-intercept of the line that passes through the point (6, -3) and has a slope of -2.

$y = mx + b$
$6 = -2(-3) + b$
$6 = 6 + b$
$0 = b$ ✗

Write an equation of the line that passes through the given points.		
4.	a) (1, 4), (2, 7)	b) (10, -5), (-5, 1)
5.	a) (7, 8), (1, 8)	b) (5, 1) and (1, 3)
6.	a) (7, 8), (1, 8)	b) (4, -1.5), (4, 4.5)

Write an equation of the line.

7)



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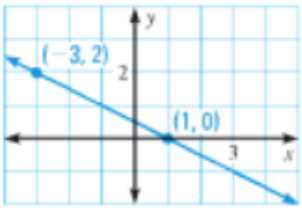
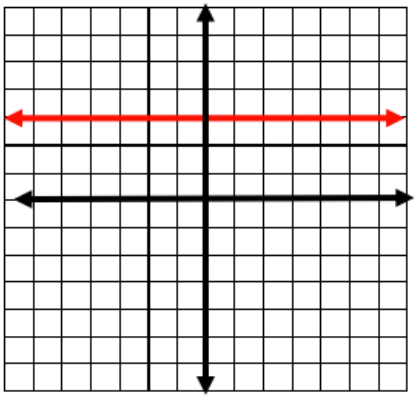
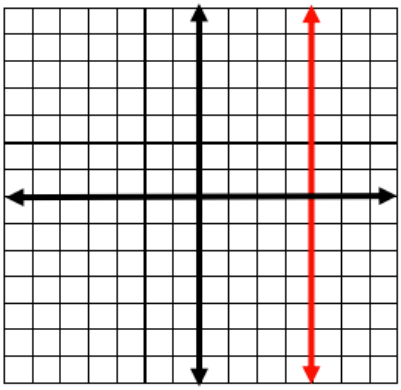


9) Write an equation of the line.

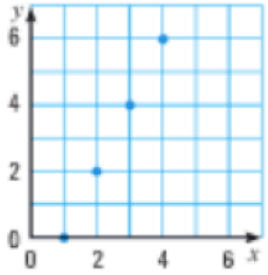


10) Write an equation of the line.



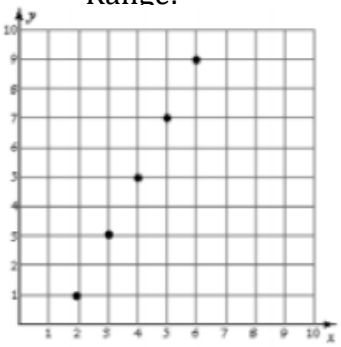
Identify the Domain and Range. The write an equation for the line that would go through the given points.

11) Domain:
Range:



Equation:

12) Domain:
Range:



Equation:

Use the table to write an equation of a line.

13)

x	y
1	12
2	9
3	6
4	3

14)

x	y
4	14
8	10
12	6
16	2

15)

x	y
-4	2
-3	3
-2	4
-1	5

16)

x	y
-5	10
-10	20
-15	30
-20	40

6.6 Use Linear Equations in Slope-Intercept Form

1) Through (-1, 2), m = -6

2) through (1, 1) and (3, -2)

APPLICATION

3) You find a jar of quarters on the sidewalk and decide to start collecting them to cash in at the end of the school year. You are able to find 50 new quarters every week and after 5 weeks you have 350 total quarters.

Write an equation that gives the number of quarters as a function of how many weeks passes.

At the end of school (24 weeks) you cash in your quarters. How much money do you have?

Write the equation given the table and answer the question.

4)

Students studying motion observed a cart rolling at a constant rate along a straight line. The table below gives the distance, d feet, the cart was from a reference point at 1-second intervals from $t = 0$ seconds to $t = 5$ seconds.

t	0	1	2	3	4	5
d	14	20	26	32	38	44

Which of the following equations represents this relationship between d and t ?

A. $d = t + 14$
B. $d = 6t + 8$
C. $d = 6t + 14$
D. $d = 14t + 6$
E. $d = 34t$

5)

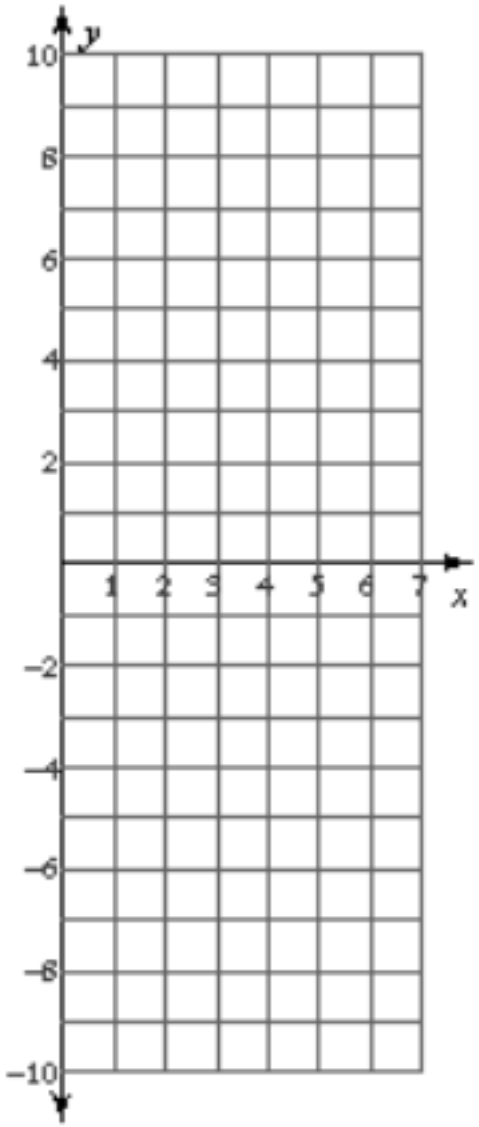
6) After his HELLO KITTY business failed Mr. Kelly decided to start a new business selling pencils to kids who don't bring them to class. After 1 month he still owes $2, but after 4 months he has $7.

a) What's Mr. Kelly's slope (rate of change) for this situation?

b) What's Mr. Kelly's y-intercept (initial value) for this situation?

c) Write an equation of the line for the given situation. Graph the line.

d) How much money would Mr. Kelly have after 10 months?



7) Mr. Brust can't stand Mr. Kelly beating him at anything so he changes to selling pencils as well. after 6 months he only has $2 but after 3 months he had $4.

a) What's Mr. Brust's slope (rate of change) for this situation?

b) What's Mr. Brust's y-intercept (initial value) for this situation?

c) Write an equation of the line for the given situation. Graph the line.

d) How much money would Mr. Brust have after 10 months?