

REVIEW

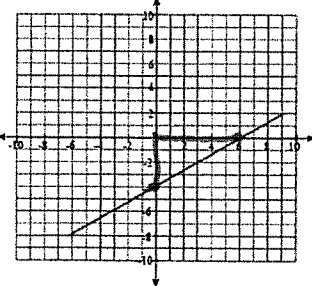
SHOW ALL WORK!!!!

<p>1. Order the numbers from least to greatest.</p> <p style="text-align: center;">$-3.5, \frac{9}{2}, \sqrt{14}, -\sqrt{9}, 6.\bar{4}$</p> <p style="text-align: center; font-size: 1.2em;">$-3.5, -\sqrt{9}, \sqrt{14}, \frac{9}{2}, 6.\bar{4}$</p>	<p>2. Estimate the square root to the nearest tenth.</p> <div style="text-align: center; font-size: 1.5em;"> $\sqrt[8]{64} \quad \sqrt[9]{729}$ </div> <p style="text-align: center; font-size: 1.5em;">8.4</p>
<p>3. $(1.2 \times 10^5) \cdot (8.7 \times 10^7)$</p> <p style="text-align: center; font-size: 1.2em;">10.44×10^{12}</p> <p style="text-align: center; font-size: 1.2em;">1.044×10^{13}</p>	<p>4. $6.7 \times 10^9 + 3.1 \times 10^8$</p> <p style="text-align: center; font-size: 1.2em;">$.31 \times 10^9$</p> <p style="text-align: center; font-size: 1.2em;">7.01 $\times 10^9$</p>

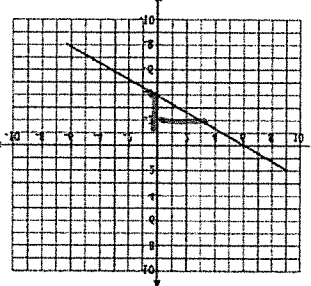
Standard: Compare properties of two linear functions given in different forms, such as a table of values, equation, verbal description, and graph (e.g., compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed).

Construct a function to model a linear relationship between two quantities given a verbal description, table of values, or graph. Recognize in $y = mx + b$ that m is the slope (rate of change) and b is the y-intercept of the graph, and describe the meaning of each in the context of a problem. (2-5 to 2-9 in the book)

5. Find the slope of each function.



slope: $\frac{2}{3}$



Slope: $-\frac{2}{3}$

x	y
0	3
2	11
4	19
6	27
8	35

Slope: 4

x	y
50	0
40	20
30	40
20	60
10	80
0	100

Slope: -2

6. Use the slope formula to find the slope between the two points.

a) (2, 7) and (-4, 0)

$$\frac{0-7}{-4-2} = \frac{-7}{-6} = \frac{7}{6}$$

b) (-4, 8) and (2, -4)

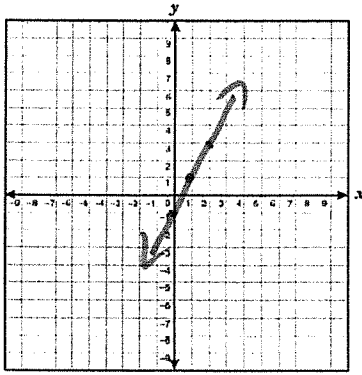
$$\frac{-4-8}{2+4} = \frac{-12}{6} = -2$$

7. Identify the slope and y-intercept for each equation.

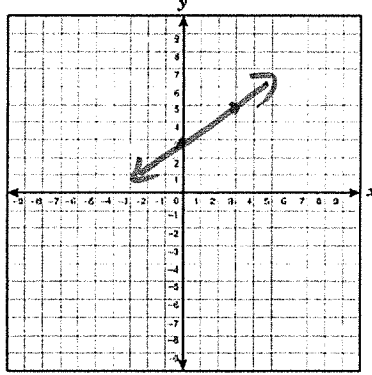
Equation	Slope	y-intercept
$y = 2x + 1$	2	1
$y = -4x$	-4	0
$y = x - 5$	1	-5
$y = \frac{x}{3} + 4$	$\frac{1}{3}$	4
$y = \frac{1}{2}x + 9$	$\frac{1}{2}$	9

8. Graph each line.

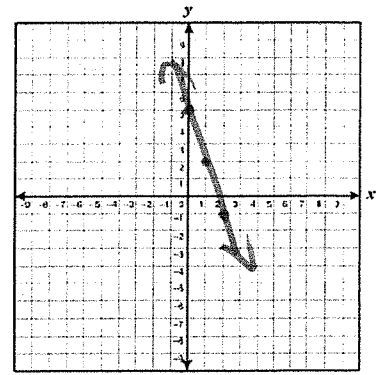
a) $y = 2x - 1$



b) $y = \frac{2}{3}x + 3$



c) $y = -3x + 5$



9. Which linear function has the greater rate of change? Explain.

x	y
-2	-2
-1	2
0	6
1	10
2	14

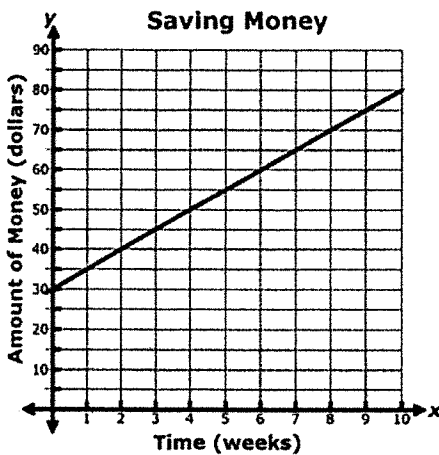
$m = 4$
 Table has a slope of 4 which is greater than 1.
 $y = x + 7$ $m = 1$

10. Sarah is making bookmarks to sell and earn money. She started with 5 bookmarks that she had previously made. Then she had 20 bookmarks after 1 hour and 35 after 2 hours. Write an equation to represent the situation and then determine how many books marks she would have at 5 hours if she works at the same rate.

Equation: $y = 15x + 5$
 How many would she have after 5 hours? 80

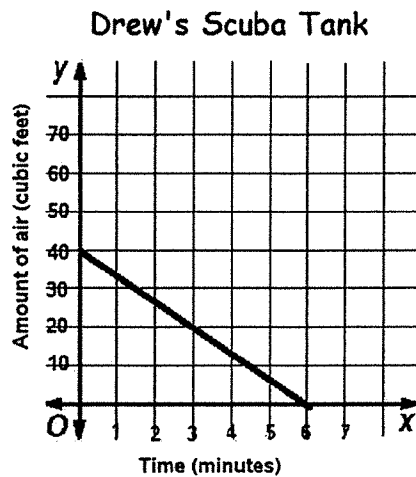
Application Problems:

11. The graph shows how much money you have saved over a period of time. Write an equation for the graph and explain what the slope and y-intercept mean.



Equation: $y = 5x + 30$
 Meaning of slope: \$5/week
 Meaning of y-int: \$30 already saved

12. The graph shows how much air is in a scuba tank over a period of time. Write an equation for the graph and explain what the slope and y-intercept mean.



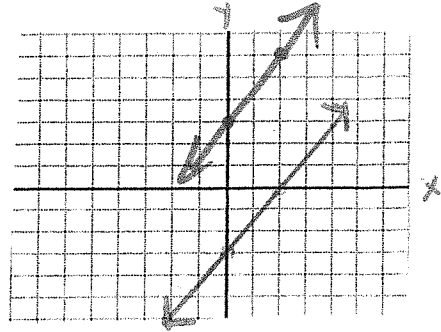
Equation: $y = -\frac{20}{3}x + 40$
 Meaning of slope: lose 20 ft³ of air every 3 seconds
 Meaning of y-int: Starting amount of air 40 ft³

13. Your friend incorrectly makes this graph as an example of a line with y-intercept of 3.

a) Explain your friend's possible error.

graphed on -3 for y-int
(0, -3)

b) Draw a line on the graph that does represent a y-intercept of 3.

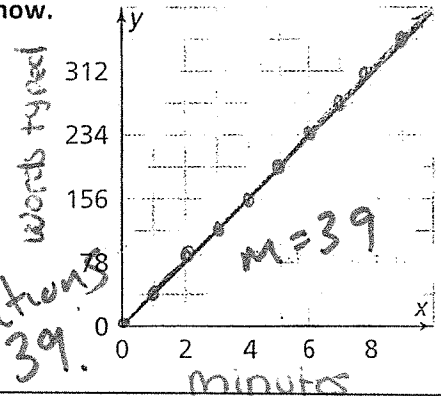


14. Ashton, Alexa, and Clara want to know who types the fastest. The equation $y = 39x$ models the rate for Ashton. The table below shows the relationship between words typed and minutes for Alexa. The graph shows the same relationship for Clara. Who types the fastest? Explain how you know.

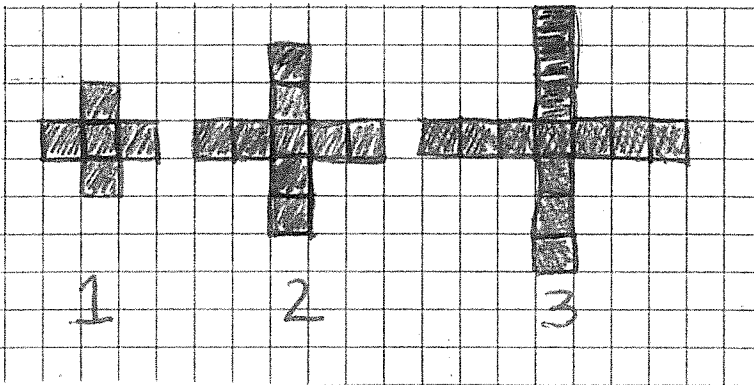
Minutes	Words typed
2	78
3	117
4	156
5	195

$m = 39$

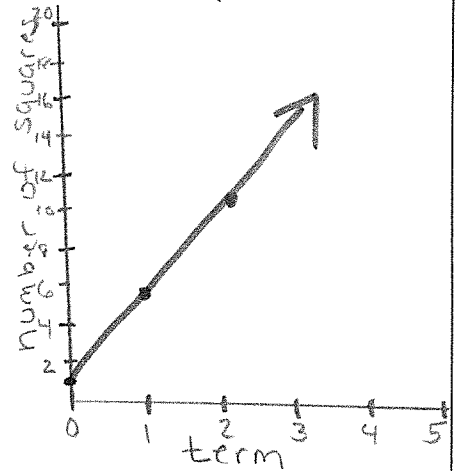
$y = 39x$
 $m = 39$
They all type the same speed, because the slopes of all three relations is 39.



15. Represent the pattern as a table, graph, and equation. Let x represent the term of the pattern and y the total number of squares. Explain what the slope and y-intercept would mean.



x	y
1	5
2	9
3	13



Equation: $y = 4x + 1$
Slope meaning: Add 4 blocks every term

y-intercept meaning: 1 block to start the pattern

Mental Math: Solve each problem mentally and explain your reasoning.

16.
 $\frac{3}{4}$ of 800 = 600
 $\frac{1}{4}$ of 800 = $200 \times 3 = 600$

17.
 $1727 + 103 = 1830$
 $1700 + 100 = 1800$
 $27 + 3 = 30$
 $1800 + 30 = 1830$

Extra Practice: Reflex, Pearson: 2-7 Lesson quiz, 2-8 and 2-9 math xl extra practice.

