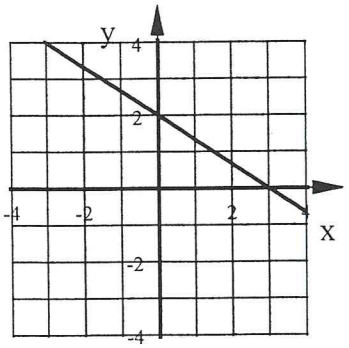
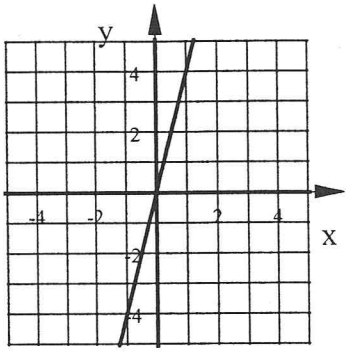
Algebra 1 Chapter 6 Review Spring 2014

1. Write the equation in Slope-Intercept Form.

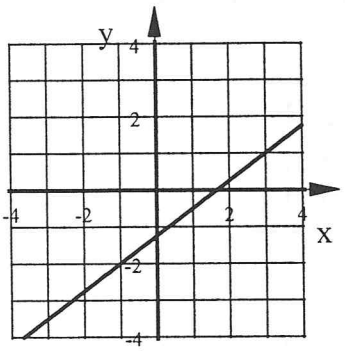
a)



b)



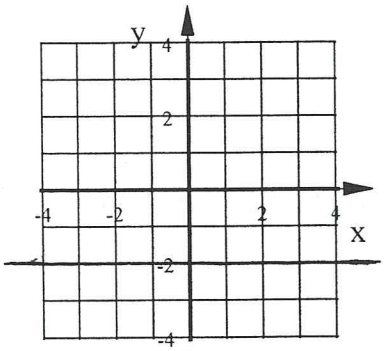
2. Write the equation in Point-Slope Form.



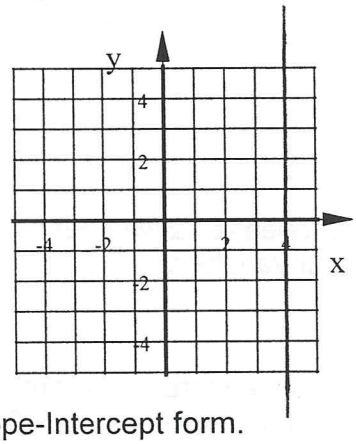
3. Find the x and y intercepts for this equation: $8x - 16y = 32$

4. Write the equation of each line:

a)



b)



5. Rewrite each equation into Slope-Intercept form.

a) $y - 3 = -4(x + 6)$ b) $4x - 8y = 48$

6. Is each pair of lines parallel, perpendicular, or neither?

a)	b)	c)	d)	e)
$y = 4x - 7$	$y = 3x - 6$	$y = \frac{1}{2}x + 8$	$x = 4$	$y = 2x + 7$
$y = \frac{1}{4}x + 3$	$y = 3x + 6$	$4x + 2y = 24$	$y = 3$	$y = 2$

7. Given the line $y = 2x - 6$

a) Write the equation of a line parallel to this line and passing through the point $(-7, 9)$. Give your answer in Point-Slope and Slope-intercept Form.

b) Write the equation of a line perpendicular to this line and passing through the point $(4, 8)$. You can give the answer in any form you wish.

8. Use these two points: $(-4, 23)$ & $(10, -12)$.

a) Write the equation of this line in Point-Slope form. b) Write the equation of this line in Slope-Intercept form.

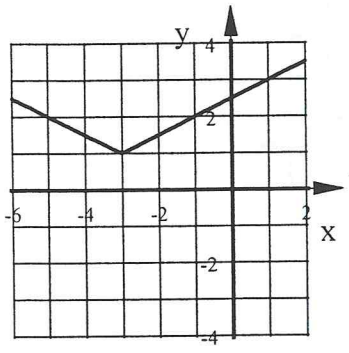
9. Graph each absolute value function using at least five points.

a) $y = 2|x + 1| - 4$ b) $y = -3|x - 4| + 5$

10. Write the equation of the line that passes through each pair of points.

a) $(6,-2)\&(-3,-2)$ b) $(8,7)\&(8,1)$

11. Write the equation of this graph:



12. Graph each equation.

a) $y = 3x - 5$ b) $y = -\frac{3}{5}x$ c) $x = 6$ d) $16x - 24y = 48$ e) $y = -5$

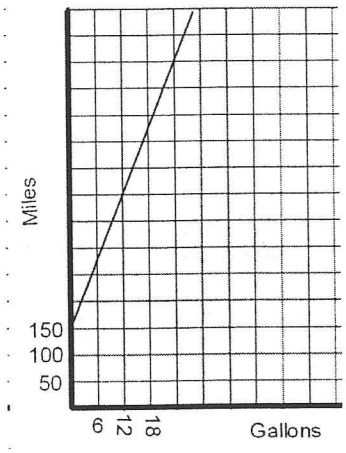
f) $y - 1 = \frac{2}{3}(x + 6)$

13. Model this situation with an equation: The scientist released a weather balloon from the top of a 35 foot tall tower. The balloon rose 20 feet per second. Define your variables.

14. Model this situation with an equation. During a trip to the store you spent \$10.42 on some cans of soup and some heads of lettuce. Soup cost \$1.49 a can and heads of lettuce cost \$0.99 each. Define your variables.

15. Find the rate of change for each. Give your answer as a decimal and include units.

a)



b)

# sheep	# of pounds of oats
2	13.5
14	46.5
23	71.25
36	107

16 Find the slope of the line that passes through each pair of points. Give answer in reduced form. If answer is zero or undefined write this.

a) $(6.8)\&(10,-2)$ b) $(5,-9)\&(5,1)$ c) $(-3,4)\&(5,20)$ d) $(-4,-1)\&(5,-1)$

Algebra 1 Chapter 6 Review ANSWERS Spring 2014

1. a) $y = -\frac{2}{3}x + 2$ b) $y = 4x$ 2. $y + 2 = \frac{3}{4}(x + 1)$ *or* $y - 1 = \frac{3}{4}(x - 3)$

3. $x - int = 4$ $y - int = -2$ 4. a) $y = -2$ b) $x = 4$

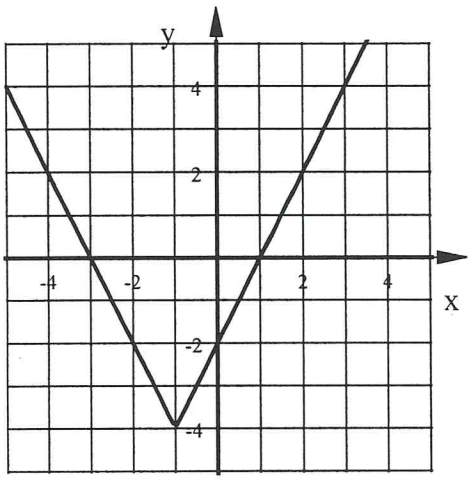
5. a) $y = -4x - 21$ b) $y = \frac{1}{2}x - 6$

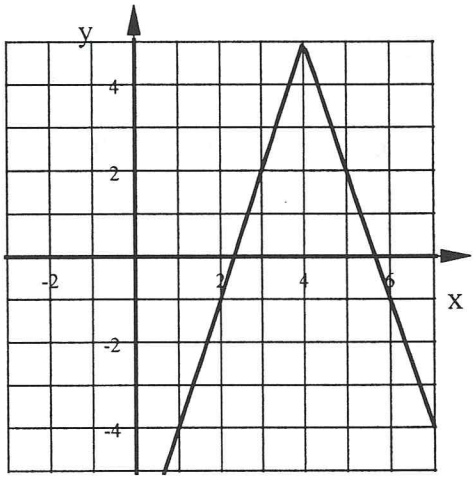
6. a) Neither b) Parallel c) Perpendicular d) Perpendicular e) Neither

7. a) $y - 9 = 2(x + 7)$ and $y = 2x + 23$ b) $y - 8 = -\frac{1}{2}(x - 4)$ *or* $y = -\frac{1}{2}x + 10$

8. a) $y - 23 = -\frac{5}{2}(x + 4)$ or $y + 12 = -\frac{5}{2}(x - 10)$ b) $y = -\frac{5}{2}x + 13$

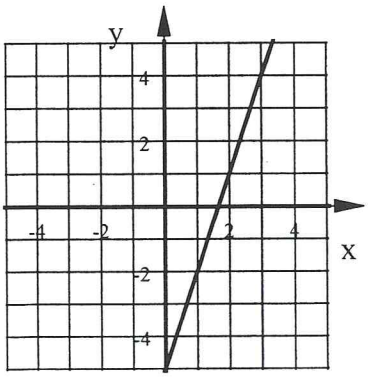
9. a) b)

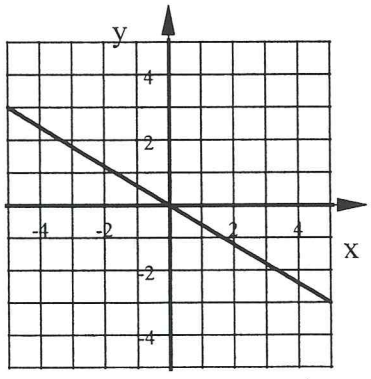


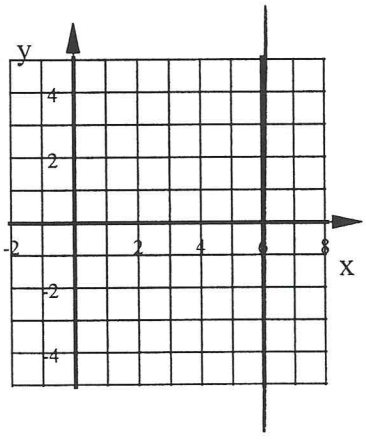


10. a) $y = -2$ b) $x = 8$ 11. $y = \frac{1}{2}|x + 3| + 1$

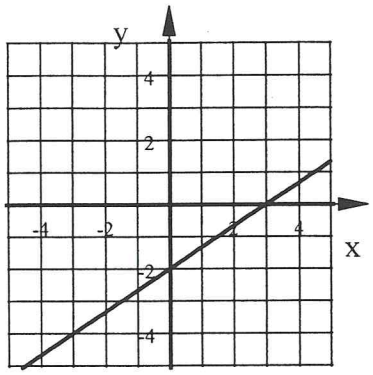
12.a) b) c)



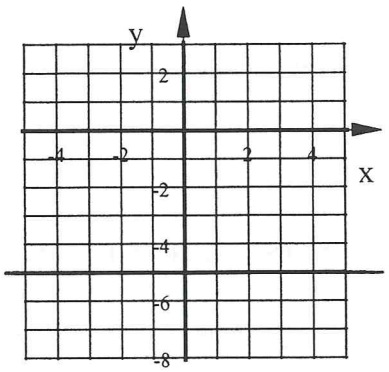




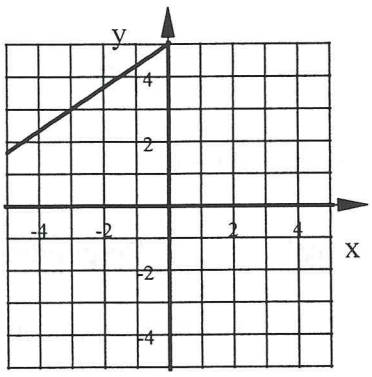
d)



e)



f)



13. $h = 20s + 35$ h =height of the balloon s =# of seconds

14. $1.49S + 0.99L = 10.42$ S =# cans of Soup L =# heads of Lettuce

15. a) 20.83 $\frac{miles}{gallon}$ b) 2.75 $\frac{\text{pounds of oats}}{\text{sheep}}$

16. a) $m = -\frac{5}{2}$ b) m is undefined c) $m = 2$ d) $m = 0$