

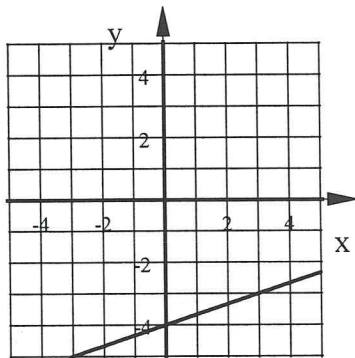
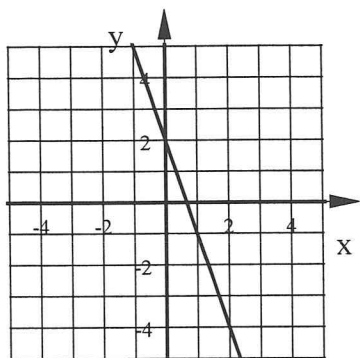
# Algebra 1 Review Sec 6-1 to 6-4 Fall 2014

1. State the slope and y-intercept of the graph of each equation.

- a)  $y = 7x$       b)  $y = 5$       c)  $y = 6 - x$       d)  $y + 7 = -3(x - 2)$       e)  $6x - 9y = 36$       f)  $x = -4$

2. Write the equation of each line in slope-intercept form.

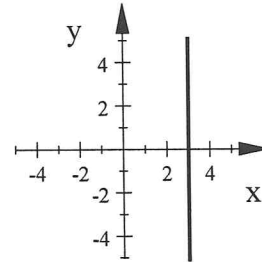
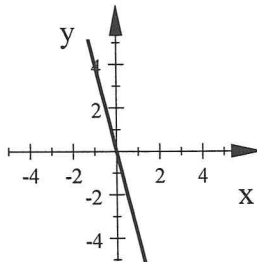
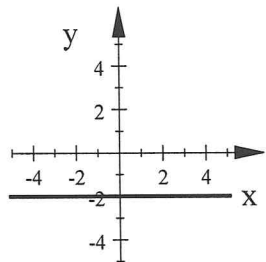
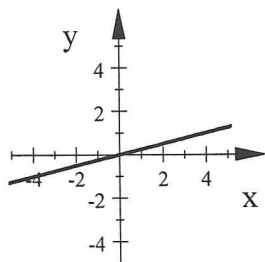
- a.      b.



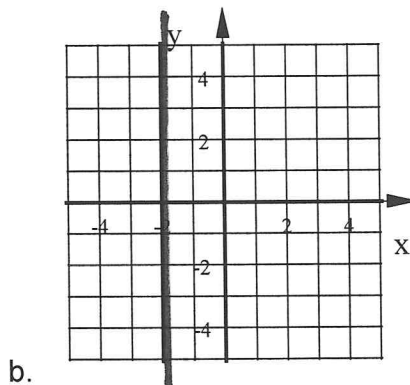
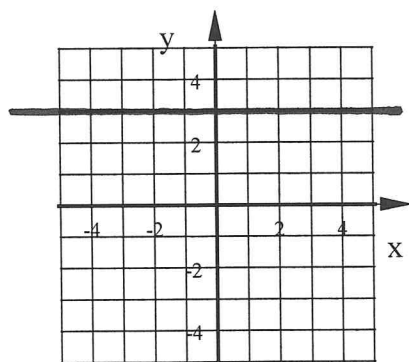
- c. The line passes through the points  $(-4, -7)$  and  $(-24, 3)$

3. State whether the slope of each line is Positive, Negative, Zero, or Undefined.

- a.      b.      c.      d.



4. Write the equation of each line:



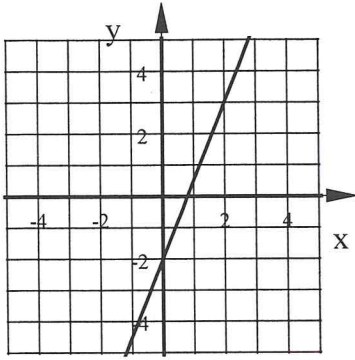
- a.      b.  
 c) The line passes through the points  $(5, 4)$  and  $(-6, 4)$   
 d) The line has an undefined slope and passes through the point  $(-3, 11)$   
 e) The line passes through the points  $(-1, 8)$  and  $(-1, -6)$   
 f) The line has a slope of zero and passes through the point  $(-5, 7)$

5. Rewrite each equation into Slope-Intercept form.

- a)  $y - 1 = \frac{2}{3}(x + 6)$       b)  $4x - 8y = 48$

6. Write the equation of each line in Point-Slope Form:

- The line has a slope of  $-3$  and passes through the point  $(8, -4)$
- The line passes through the points  $(-1, 6)$  and  $(-4, 7)$
- The line in the graph



7. Find the x and y intercepts of each line:

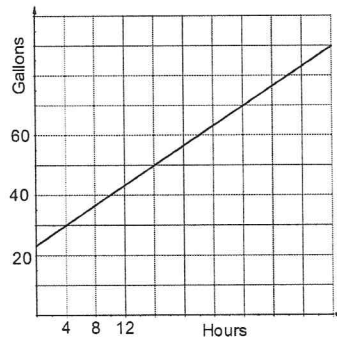
- $12x - 6y = 36$
- $-13x + 7y = -8$

8. State the slope and the point that was used to write this equation:  $y + 8 = 2(x - 7)$

9. Find the rate of change for each. Give the answer as an integer or a decimal (rounded to the nearest hundredth as needed) and include units.

- Use the table below
- Use the graph below.

Boxes	Pounds
3	37.25
5	54.75
9	89.75
14	133.5



10. Graph each equation.

- $y = 3x - 5$
- $y = -\frac{3}{5}x$
- $x = 6$
- $16x - 24y = 48$
- $y = -5$
- $y + 1 = -4(x - 2)$
- $y + 3 = 5(x - 4)$
- $8x + 6y = 18$

11. On your shelf there are 10 books. You plan to buy and read 3 books a month.

- Write an equation to model this situation. Define your variables.
- How many books will you have in 9 months?
- How many months will it take until you have 49 books?

12. At the store Baseball Cards cost \$2.25 a pack and Hockey Cards cost \$1.50 a pack. You spent \$78.

- Write an equation to model this situation. Define your variables.
- How many packs of Hockey cards did you buy if you also bought 12 packs of baseball cards?

1. a)  $m = 7$   $b = 0$     b)  $m = 0$   $b = 5$     c)  $m = -1$   $b = 6$     d)  $m = -3$   $b = -1$     e)  $m = \frac{2}{3}$   $b = -4$   
 f)  $m = \text{undefined}$   $b = \text{none}$

2. a)  $y = -3x + 2$     b)  $y = \frac{1}{3}x - 4$     c)  $y = -\frac{1}{2}x - 9$

3. a) Pos b) Zero c) Neg d) Undefined

4. a)  $y = 3$     b)  $x = -2$     c)  $y = 4$     d)  $x = -3$     e)  $x = -1$     f)  $y = 7$

5. a)  $y = \frac{2}{3}x + 5$     b)  $y = \frac{1}{2}x - 6$

6. a)  $y + 4 = -3(x - 8)$     b)  $y - 6 = -\frac{1}{3}(x + 1)$  or  $y - 7 = -\frac{1}{3}(x + 4)$

c)  $y - 3 = \frac{5}{2}(x - 2)$  or  $y + 2 = \frac{5}{2}x$

7. a)  $x - \text{int} = 3$      $y - \text{int} = -6$     b)  $x - \text{int} = \frac{8}{13}$      $y - \text{int} = \frac{-8}{7}$

8.  $m = 2$  point:  $(7, -8)$

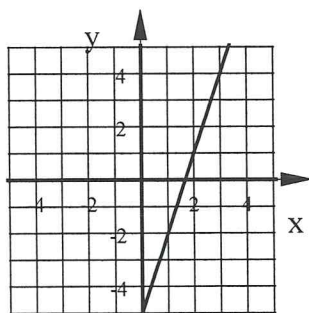
9. a) Rate of Change =  $8.75 \frac{\text{pounds}}{\text{box}}$     b) Rate of Change =  $1.67 \frac{\text{gal}}{\text{hr}}$

10. a)

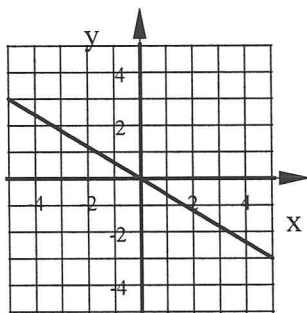
b)

c)

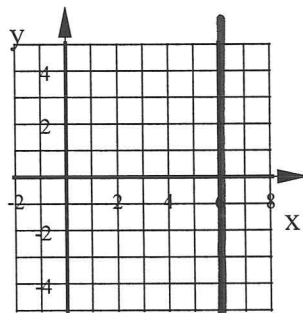
d)



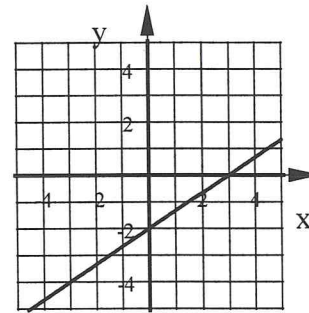
e)



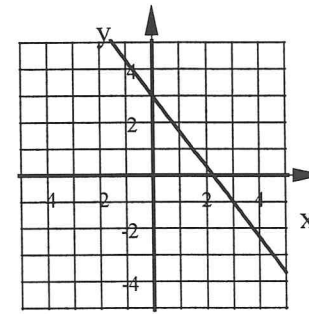
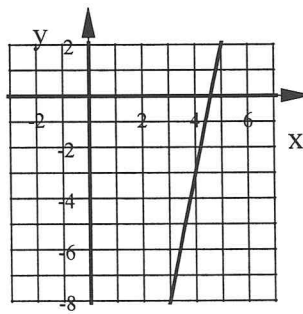
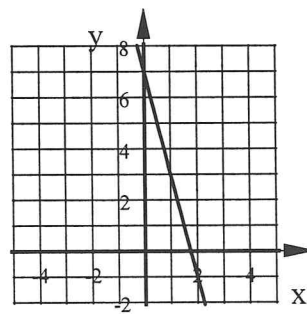
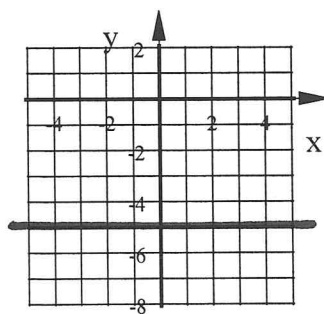
f)



g)



h)



11. a)  $y = 3m + 10$      $y = \text{total \# of books}$      $m = \text{\#months}$

b) 37 books    c) 13 months

12. a)  $2.25B + 1.50H = 78$     b) 34 packs of Hockey Cards