Business Math **Week 2 Quiz**

1. (2 pts)

Find the equation (in terms of x) of the line through the points (-3,5) and (2,-10)

$y =$

2. (2 pts)

Last year, Pinwheel Industries introduced a new toy. It cost $ 1900 to develop the toy and $ 30 to manufacture each toy. Fill in the blanks below as appropriate.

A.) Give a linear equation in the form $C = mx + b$ that gives the total cost, C , to produce x of these toys:

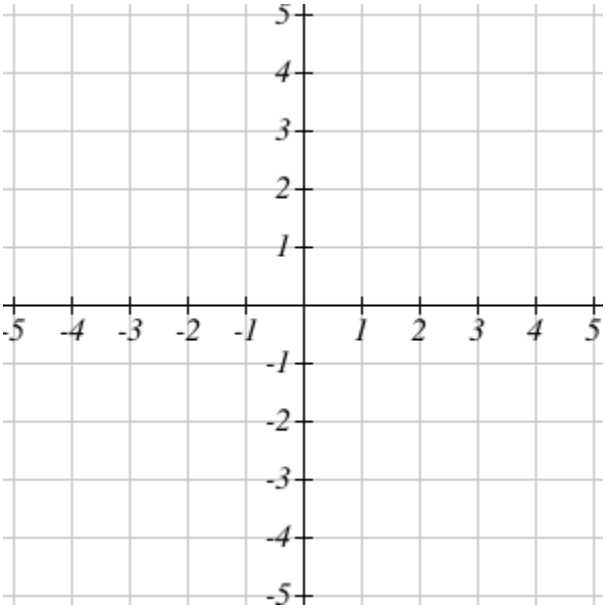
$C =$

B.) The total cost to produce $n = 1350$ toys is $.

C.) With $ 76900 , a total of toys can be produced.

3. (2 pts)

Sketch a graph of $f(x) = -\frac{1}{2}x + 1$



4. (2 pts)

Find the point at which the line $f(x) = -x + 5$ intersects the line $g(x) = 2x - 1$

Give your answer as coordinates of the point in the xy-plane (,)

5. (2 pts)

You decide to begin selling light sabers at the local carnival. Your cost for each light saber is $1.25 plus you have to pay a fixed weekly fee of $130 for the booth. Your plan is to sell each light saber for $2.75.

a. Write a function, $C(n)$, to represent your total costs for the week if you sell n light sabers.
$C(n) =$

b. Write a function, $R(n)$, to represent the revenue from the sale of n light sabers during the week.
$R(n) =$

c. Write a function, $P(n)$, that represents the profits for selling n light sabers in a given week.
$P(n) =$

d. How many items must you sell to break even?
light sabers

6. (2 pts)

Suppose the quantity demanded, q, of a product when the price is p dollars is given by the equation $p = 624 - 6q$, and the quantity supplied is given by the equation $p = 2q$. Find the equilibrium price and quantity.

Equilibrium quantity: items

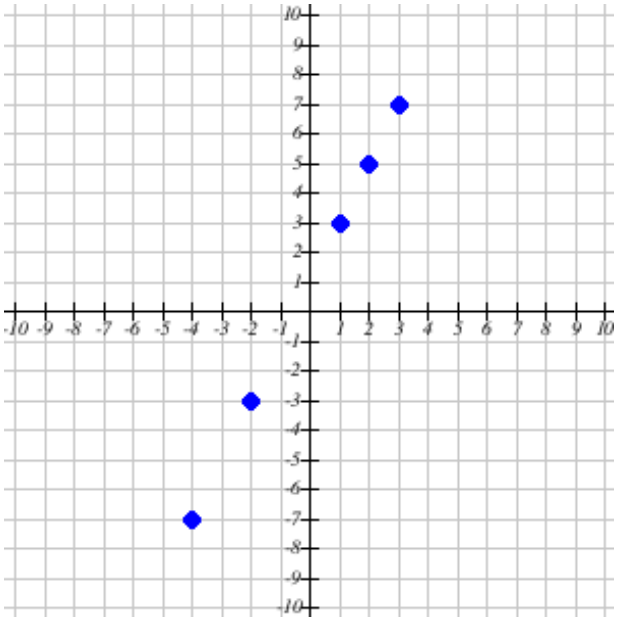
Equilibrium price: $

7. (2 pts)

Function Notation, Graphs, Ordered Pairs, Tables

The function $g(x)$ is graphed below. ***Rewrite the points*** *on the graph in table and using function notation. Your x's should be in order from least to greatest.*

Graph



$g(x)$

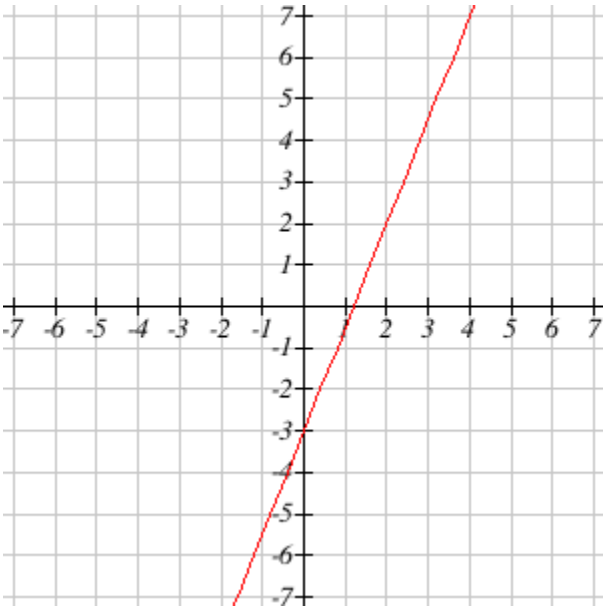
Table

x	$g(x)$

List the points as $g(x) = y$

Example: (0,0) gets written as g(0)=0

8. (2 pts)



Two points on this line are (0, -3) and (2, 2)

Find the values of m and b for this line.

$m =$

$b =$

Enter your answers as integers, fractions, or decimals.

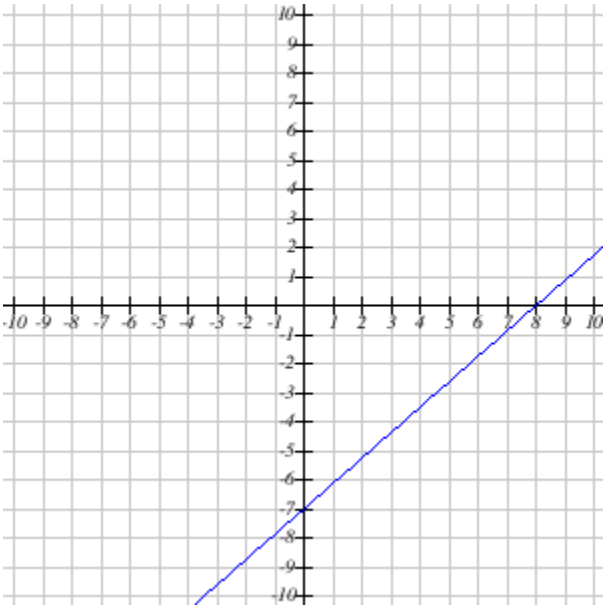
9. (2 pts)

Given the points $(-8,1)$ and $(0,1)$ on a line, find the equation of the line.

$y =$

10. (2 pts)

Find the slope of the line given its graph. Enter your answer as an integer or a reduced fraction.



Slope =