

Math 80
Exam 1
February 2, 2007

Name: _____

1. Your exam contains 5 questions and 5 pages; Please make sure you have a complete exam.
2. The entire exam is worth 100 points. Point values for problems vary and these are clearly indicated. You have 50 minutes for this exam.
3. Make sure to **ALWAYS SHOW YOUR WORK**; you will not receive any partial credit unless all work is clearly shown. If in doubt, ask for clarification.
4. If you need extra space, use the back page of the exam and clearly indicate this.
5. You are allowed one 8.5×11 sheet of handwritten notes (both sides).
6. Leave answers in exact form (as simplified as possible) or round to 4 decimal places.

Problem	Total Points	Score
1	20	
2	20	
3	30	
4	15	
5	15	
Total	100	

1. (10 pts.) Find the solutions for the following equations.

(a) (pts.) $\frac{2}{3}a + 5 = \frac{1}{4}a$

(b) (10 pts.) $3(p + 5) - 5 + 2p = 5(p + 2)$

2. (10 pts.) Solve the following equations for the indicated variable.

(a) (pts.) Solve $P = 2L + 2W$ for the variable W .

(b) (10 pts.) Solve $A = \frac{3}{2}(B - 4)$ for the variable B .

3. (5 pts.) Consider the linear equation $8x - 2y = 6$.

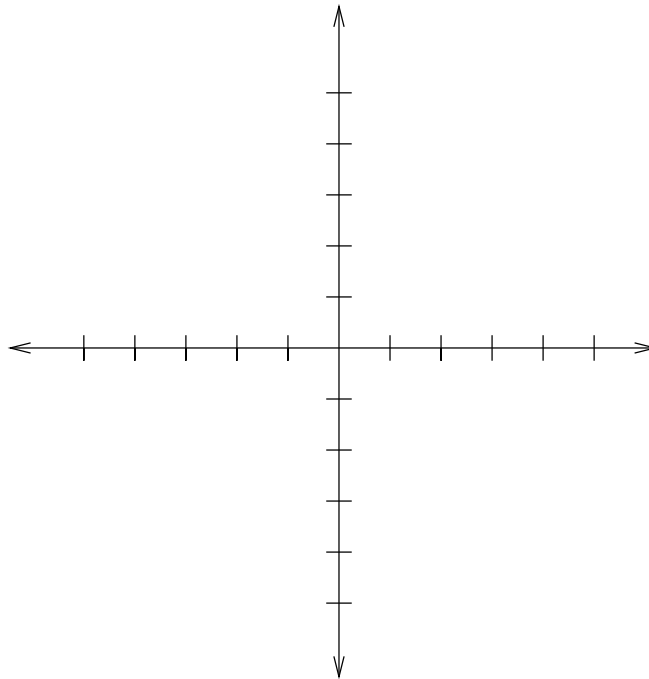
(a) (pts.) Is $(2, -5)$ a solution to the equation?

(b) (6 pts.) Complete the following table of ordered pairs for the equation.

x	y
1	
	5
-2	

(c) (6 pts.) What are the x and y -intercepts for the graph of $8x - 2y = 6$?

(d) (7 pts.) Use the information in parts (b) and (c) to graph the equation $8x - 2y = 6$ below.



(e) (6 pts.) What is the slope of the line?

4. (15 pts.) You find a well-paying summer job selling “I ♥ Seattle” t-shirts and mugs. The mugs are more popular and it turns out that for every t-shirt you sell, you sell 12 mugs. Suppose on a particular day, you sell a total of 182 items. How many of each item did you sell? (Set up a linear equation to solve.)

5. (15 pts.) While selling t-shirts and mugs, you managed to save \$5000 to put into investments. You decide to invest some of it in a bond that has an annual interest rate of 12%, and the rest in an account that has an annual interest rate of 8%. After a year, you have made \$540 in interest. How much did you invest at 12% and 8%? (Set up a linear equation to solve.)