Math 80
Exam 2
February 27th, 2008

Name: _____

1. Your exam contains 6 questions and 5 pages; Please make sure you have a complete exam.
2. The entire exam is worth 100 points. Point values vary and these are indicated on each problem. You have 50 minutes for this exam.
3. Make sure to **ALWAYS SHOW YOUR WORK**. If in doubt, ask for clarification.
4. If you need extra space, use the back of the exam and clearly indicate this.
5. You are allowed one 4" $\times$ 6" notecard for handwritten notes (both sides).
6. Simplify answers as much as possible.
7. Put a $\boxed{\text{box around your final answer}}$ where applicable.

Problem	Total Points	Score
1	26	
2	10	
3	18	
4	16	
5	15	
6	15	
Total	100	

1. (26 pts.) Carry out the following operations.

(a) (5 pts.) $(3x + \frac{1}{2}) + (-x + \frac{2}{7})$ (Do not write your answer with decimals.)

(b) (5 pts.) $(2t^2 - 5t + 20) - (-3t^2 + 4t + 8)$

(c) (5 pts.) $-0.3y^2(y^7 - 4y + 1)$

(d) (5 pts.) $(2x + 5)(x - 3)$

(e) (6 pts.) $(x + 2)^2 - 6x$

2. (10 pts.) **Factor** the GCF out of the followiing.

   (a) (5 pts.) $36t^3 - 27t^2$

   (b) (5 pts.) $8a^2b + 16ab^3$

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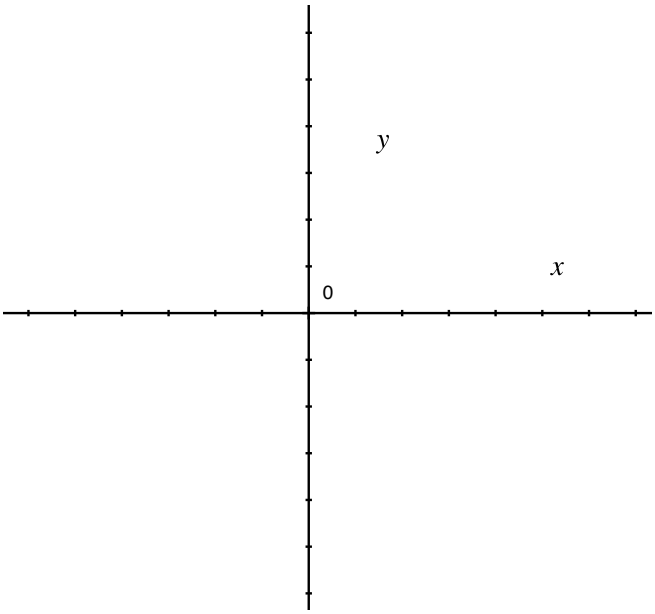
3. (18 pts.) Solve each of the systems below by using substitution **or** elimination.

   (a) (9 pts.) $\begin{cases} 4x + y = -15 \\ 2x + 3y = 5 \end{cases}$

   (b) (9 pts.) $\begin{cases} \frac{2}{3}a + \frac{b}{4} = 1 \\ a - 2b = 11 \end{cases}$

4. (16 pts.) Graph the following lines on the axes below. **Label** each line.

   (a) (11 pts.) $3x + 2y = 8$



   (b) (5 pts.) $x = 3$

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5. (15 pts.) Ernie has a jar full of quarters and dimes. Yay! If he has **$38 total** in the jar and it contains **200 coins**, how many quarters and how many dimes does he have?

   (Use equations to solve and write your answer in a complete sentence.)

6. (15 pts.) Find an equation of a line through the points $(2, 0)$ and $(-1, 9)$. Write your final answer in slope-intercept form.
