

Math 80
Exam 2
February 26th, 2010

Name: _____

1. Your exam contains 7 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. Simplify answers as much as possible.
5. Put a box around your final answer where applicable.
6. No calculators are permitted for this exam.
7. If you need extra space, use the back of the exam and clearly indicate this.
8. You are allowed one 4" × 6" notecard for handwritten notes (both sides).

Problem	Total Points	Score
1	26	
2	5	
3	18	
4	12	
5	16	
6	15	
7	8	
Total	100	

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

(a) (5 pts.) $(1.2t^2 - t + 10) + (0.25t^2 + t - 4)$

(b) (5 pts.) $(-20x^3 - 5x^2 + 7) - (2x^3 - 2x^2 + 9x)$

(c) (5 pts.) $\frac{2}{3}x(6x^8 - 3x^2 + 4)$

(d) (5 pts.) $(12m - 3)(m + 4)$

(e) (6 pts.) $10x^2 \cdot (x + 1)^2$

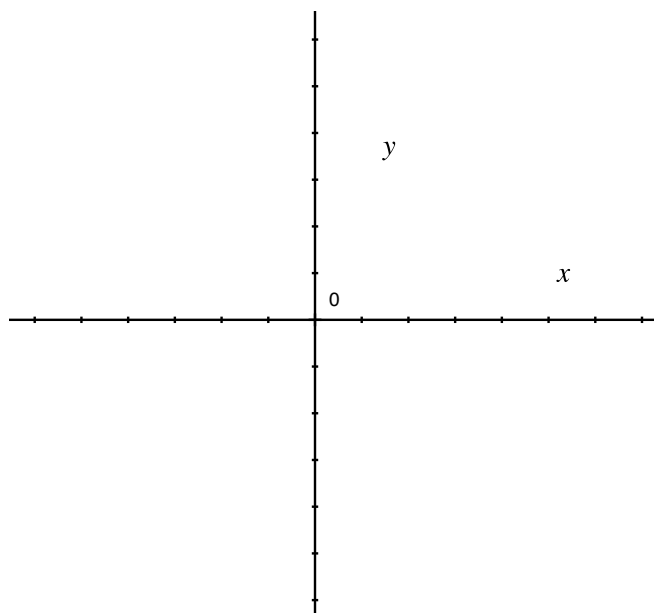
2. (5 pts.) Find the GCF of 28 and 70.

3. (18 pts.)

(a) (9 pts.) Solve $\begin{cases} 2y = x - 12 \\ 4x + 3y = -7 \end{cases}$ using **substitution**.

(b) (9 pts.) Solve $\begin{cases} 4x = 3y - 1 \\ 6x + 2y = 5 \end{cases}$ using **elimination**.

4. (12 pts.) Write $3x - 6y = 12$ in slope-intercept form and **graph** it on the axes below. (**Label** the points you use and put a scale on your axes.)



-
5. (16 pts.) Carl and David leave from the same point on bicycles and travel in **opposite** directions at constant speeds. Carl bikes 10 kilometers per hour **faster** than David. If Carl and David are 150 kilometers apart after 3 hours, find the **speed** of each bicyclist.

(Use **two** variables and **two** equations to solve. Write your answer in a complete sentence.)

6. (15 pts.) Find an equation of the line through the points $(-1, 4)$ and $(2, -2)$. Write your final answer in slope-intercept form.

-
7. (8 pts.) Find an equation of the line with a y -intercept of $(0, 10)$ if the line is **perpendicular** to the line given by $6y = -x + 12$.