Name_____
Date_____

Review Quiz #2

Due at the beginning of class on Monday, May 9, 2005

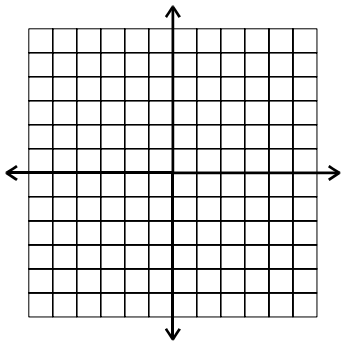
Directions: This is a take home quiz. **Show your work!** You may use any notes and/or the textbook. You may not work with any other person or the internet. Put in the appropriate time and you can do well on this quiz. Each question is worth 3 points.

No work = No credit

1. (Chapter 1) The area of a trapezoid is $A = \frac{1}{2}h(b_1 + b_2)$. Solve for b_1.

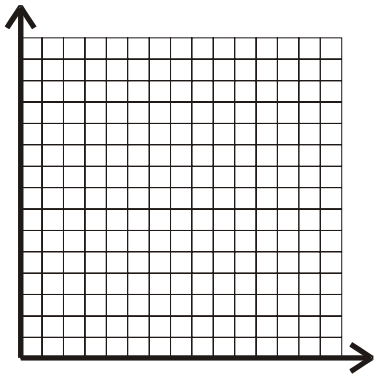
2. (Chapter 2) Suppose y varies inversely with the cube of x and directly with the square of z. If y = 6.35 when x = 3 and z = 7, what would y equal when x = 5 and z = 13?

3. (Chapter 3) Graph $\begin{cases} y = x - 4, \text{for } x < -3 \\ y = 1, \text{ for } -3 \le x \le 3 \\ y = 2x + 1, \text{ for } x > 3 \end{cases}$



4. (Chapter 4) Calculate a matrix for $r_x \circ R_{90}$.

5. (Chapter 5) Jocelyn's Jewelry Store makes rings and pendants. Every week the staff uses at most 500 g of metal and spends at most 80 hours making jewelry. It takes 5 g of metal to make a ring and 20 g to make a pendent. Each ring takes 1.5 hours to make and each pendant takes 1 hours. The profit on each ring is $90 and the profit on each pendent $40. The store wants to earn as much profit as possible. How many of each type of jewelry should the store make to maximize the profit? *Take from page 343 #42.*



6. (Chapter 6) Change the equation $y = 3x^2 - 18x + 31$, into vertex form.

7. (Chapter 7) Simplify $\dfrac{\left(x^4 y^6\right)^{1/2}}{xy^{5/2}}$.

8. (Chapter 8) Solve $\sqrt{6x} + 3\sqrt{6x} = 50$

9. (Chapter 9) Under certain conditions, the height h in feet above sea level can be approximated by knowing the atmospheric pressure P in pounds per square inch (psi) using the model $\dfrac{\ln P - \ln 14.7}{-0.000039} = h$. What would the pressure be at the top of Mt. Everest? (29,028 ft)