

Name \_\_\_\_\_

Student ID # \_\_\_\_\_

Class Section \_\_\_\_\_

Instructor \_\_\_\_\_

Math 1030  
Summer 2008

**EXAM**

| Dept. Use Only<br>Exam Scores |        |       |
|-------------------------------|--------|-------|
| Problem                       | Points | Score |
| 1.                            | 20     |       |
| 2.                            | 20     |       |
| 3.                            | 20     |       |
| 4.                            | 20     |       |
| 5.                            | 20     |       |
|                               | TOTAL  |       |

**Show all your work and make sure you justify all your answers.**



2. Perform the following conversions.

(a) Convert 230 pounds to ounces and kilograms.

(b) Convert 54 cubic feet to cubic yards.

(c) Given that the cost of a kilo-watt hour is 25 cents and one kilo-watt hour is 3.6 million joules how much does it cost to light a 75 watt light bulb for one month?

(d) Suppose that a woman has 4 liters of blood and she quickly consumes 40 ounces of beer with a alcohol content of 3 percent. What would her Blood alcohol content be if all the alcohol was absorbed into her blood immediately? What if instead a man who had 5.5 liters of blood consumes this amount of alcohol? What would his BAC be?

3. Suppose you are traveling to see a wizard who lives 600 miles away and your car gets 23 miles a gallon. Given that gas costs 4.50 dollars a gallon how much does it cost to travel to the wizard?

4. Do the following problems

(a) Suppose your boss says that he/she must cut wages by 15 percent or make cutbacks, but to quell the employees complaints your boss tells you that after one year he/she will raise your salary by 15 percent. What is your new salary after the cut and after one year if you make 50,000 dollars a year? What is the relative and absolute difference in wage after one year?.

(b) Suppose that a nice apartment costs 35 percent more than a really not so nice apartment in which things break down every two weeks. If the nice apartment costs 675 dollars how much does the not so nice apartment cost?

5. Do two of the following problems. (Clearly indicate which two you want graded otherwise I reserve the right to give you a zero score.)

(a) Simplify  $\frac{x^6 y^5}{x^8 y} (x^2 y^3)^{-4}$

(b) Solve for x.  $x^2 + 3x - 28 = 0$ .

(c) Simplify  $(x^{-2} y^2)^3 (x^3 y^2)^5$

(d) solve  $\frac{x-2}{3} = \frac{x+4}{2} = 0$  for x.