Show all work to get full credit of this 25 point quiz.

1. (5 points) Solve for P:

$$$4000 = P(1+0.02)^5$$
 (1)

2. (4 points) Give the Equation of the Future value of Compound Interest (with more compoundings). Define all the variables you use.

3. (5 points) The population of the world in the year 2000 was 6.0 billion. This was a 20% increase over the population in 1990. What was the population of the world in 1990?

- **4.** (6 points) If you deposit \$5000 at 8% annual compount interest for 13 years, what will the value be if the compounding is:
- (a)Annual
- (b)Semi-Annual
- (c)Quarterly
- (d)Daily

5. (5 points) An ad for interest rates on certificate of deposit (CD) advertises a CD with a minimum deposit of \$100,00 and an APY of 1.15%. If you invest the minimum amount, what will the value of this investment be at the end of a 5 year period? Round your answer to the nearest dollar.