

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

1. (*5 points*) Solve for P: $\$ 3000 = P(1 + 0.02)\exp()$


2. (*6 points*) Give the Equation of the Future value of Compound Interest (with more compoundings). Define all the variables you use.

3. (*3 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. (5 points) If you deposit \$1000 at 6% annual compound interest for 10 years, what will the value be if the compounding is:

- (a) Annual
- (b) Semi-Annual
- (c) Quarterly
- (d) Daily

5. (5 points) The advertisement shown below was found on a website that advertises current interest rates for various certificates of deposit (CDs).

| 5 yr jumbo CD | | | |
|--|---------------------|--------------------------------|-------------|
| Institution | APY | Rate | Min Deposit |
|  ★★★★☆ | 1.15% Fri May 31 | 1.15 % Compounded quarterly | \$100,000 |

Assuming that you invest the minimum deposit shown in the advertisement for this CD, what will be the value of this investment at the end of the five-year period based upon the APR? Round your final answer to the nearest dollar.