Addition to Practice Test 3 - Section 3.4 / 3.5

Solve the problem.

1) Find out how long it takes a $3300 investment to double if it is invested at 7% compounded semiannually. Round to the nearest tenth of a year. Use the formula $A = P \left(1 + \frac{r}{n}\right)^{nt}$.

2) The formula $A = 106e^{0.032t}$ models the population of a particular city, in thousands, $t$ years after 1998. When will the population of the city reach 120 thousand?

3) Cindy will require $18,000 in 5 years to return to college to get an MBA degree. How much money should she ask her parents for now so that, if she invests it at 10% compounded continuously, she will have enough for school? (Round your answer to the nearest dollar.)

4) Larry has $2000 to invest and needs $2400 in 12 years. What annual rate of return will he need to get in order to accomplish his goal, if interest is compounded continuously? (Round your answer to two decimals.)

Solve.

5) People with lower incomes are more likely to report that their health is fair or poor. The function $f(x) = 54.8 - 12.3 \ln x$ models the percentage of Americans reporting fair or poor health. If $x$ is the percentage reporting fair or poor health, $x$ is the annual income in thousand dollars. What annual income corresponds to 10% reporting fair or poor health? (Round to the nearest thousand dollars.)
Answer Key  
Testname: PRACTICETEST3ADDITION3.4-3.5

1) 10.1 years
2) 2002
3) $10,918
4) 1.52%
5) 38 thousand dollars