Quiz 4 MAT 118, Spring 2003

**circle your section**
2 Tues 11:20
3 Thur 12:50
4 Tues 5:30

**PRINT your Name:**

1. If you invest \$1000 at 8% annually, compounded monthly, how many months will it be until you double your money?

$$\log(1000)\left(1+\frac{.08}{12}\right) \qquad \frac{\log(2000)}{\log\left(1+\frac{.08}{12}\right)} \qquad \frac{\log(1000)}{\log\left(1+\frac{.08}{12}\right)}$$

$$\frac{\log(2)}{\log\left(1+\frac{.08}{12}\right)} \qquad \sqrt{1000+\frac{.08}{12}} \qquad \frac{1}{12}\log\left(1+\frac{.08}{12}\right)$$

2. Suppose that at the end of each month, you put \$100 into an account that pays 8% annual interest, compounded monthly. How much money will be in the account at the end of 5 years?

$$100\left(\frac{\left(1+\frac{.08}{12}\right)^{60}-1}{\frac{.08}{12}}\right) \qquad \frac{\left(100+\frac{.08}{12}\right)^{60}+1}{\frac{.08}{12}} \qquad 100\left(\left(1+\frac{.08}{12}\right)^{60}\right)$$

$$1200\left(1+\frac{.08}{12}\right)^{5} \qquad 100\left(\frac{\left(1+\frac{.08}{12}\right)^{60}}{1-\frac{.08}{12}}\right) \qquad \frac{100}{12}\log\left(1+\frac{.08}{12}\right)^{60}$$

3. Suppose that at the end of each month, you put \$100 into an account that pays 8% annual interest, compounded monthly. How many months will it take to have at least \$2000 in the account?

$$\frac{\log 301}{\log 1+\frac{.08}{12}} \qquad \frac{\log\left(\frac{16}{120}+1\right)}{\log\left(1+\frac{.08}{12}\right)} \qquad \frac{\log(2000+\frac{.08}{12})}{1-\frac{.08}{12}}$$

$$\log\left(\frac{1+\frac{.08}{12}}{\log(100+\frac{.08}{12})}\right) \qquad 100\left(\frac{\left(1+\frac{.08}{12}\right)^{60}}{1+\frac{.08}{12}}\right) \qquad \frac{1}{12}\log\left(2000+\frac{.08}{12}\right)^{5}$$