

## MATH110(0402) Elementary Mathematical Models

Quiz 7, Wednesday, April 22, 2009

Name: \_\_\_\_\_

Show all work clearly and in order, and circle your final answers. Justify your answers algebraically whenever possible. Calculator is allowed in this quiz. You have 15 minutes to take this 12 point quiz. Only the first 10 points you gain will count.

**1.** (*4 points*) You are playing a game in which you flip 2 distinguishable unfair coins. The probability of resulting a head for each one coin is .6. You win \$2 if two heads appear. You win \$1 if two tails appear. Otherwise you lose \$3. What is the expected value of this game?

**2.** (*4 points*) A \$1000 certificate of deposit held for 30 days was worth \$1015. What annual rate of simple interest was earned? (Suppose one year = 365 days.)

**3.** (*4 points*) A company took out a 5 year loan for expansion at 8% interest per year, compounded monthly. At the end of the 5 years, the company owed \$10,520. What was the original amount of the loan?