Homework 7

Do the following problems in the textbook "The Mathematics of Finance". Make sure to show your explanation. The odd-numbered problems have the answer key in the back of the book.

Problem 14 of 1.1: Simplify the expression $(x^{4/3}y^{8/3})^{3/4}$

Problem 26 of 1.1: Use a calculator to approximate the value of $\frac{\ln 5}{(\ln 2)(\ln 4)}$

Problem 42 of 1.1: Solve (or approximate a solution to) the equation $\frac{2^k}{12} = 100$

Problem 1 of 2.1: An account pays 12% interest compounded monthly. If \$1000 is deposited, how much will there be in the account after

(a) 1 month

(b) 6 months

(c) 1 year

(d) 5 years

Problem 5 of 2.1: An account pays 9.2% interest per year. How much will \$2000 grow to in 5 years if the interest is compounded

(a) annually

(b) quarterly

(c) monthly

(d) daily

(e) continuously

Problem 15 of 2.1: How long does it take \$2000 to grow to \$2500 at 12% interest compounded quarterly?