**Simple Interest**

1. Invest $1,000 at 4% for 3 years. Find the accumulated amount.

**Compound Interest**

2. Invest $1,000 at 4.5% compounded \_\_\_\_\_\_\_\_\_\_ for 3 years. Find the accumulated amount.

(a) monthly (b) quarterly (c) continuously

3. A descendent of Frank Myers (on The Andy Griffith Show) was issued a $100 confederate bond from the town of Mayberry in 1861 at 8.5% compounded annually for 100 years. Find the accumulated amount.

4. When the compounding is continuous, the formula for the accumulated amount, A, of an investment (or loan) is given by the following formula, , where P is the principal, r is the annual interest rate (expressed as a decimal), and t is the time in years. At a 3.75% annual interest rate, compounded continuously, what is the value of an initial investment of $2,500 after 7 years?

5. The formula  gives the accumulated amount (A) of an investment when P is the initial investment, r is the annual interest rate, and t is the time in years, assuming continuous compounding and no deposits or withdrawals.

(a) For an initial investment of $2,000, compounded continuously at a 7.5% annual   
 interest rate, find to the nearest tenth of a year when this investment doubles in value.

(b) For an initial investment of $1,500, compounded continuously at a 4% annual interest   
 rate, find to the nearest tenth of a year when this investment triples in value.

6. The formula for the accumulated amount, A, of an investment (or loan) is given by the formula, , where P is the principal, r is the annual interest rate, and n is the annual number of interest periods, and t is the number of years.

(a) For an initial investment of $2,000, compounded monthly at a 7.5% annual interest   
 rate, find to the nearest tenth of a year when this investment doubles in value.

(b) For an initial investment of $1,500, compounded quarterly at a 4% annual interest   
 rate, find to the nearest tenth of a year when this investment triples in value.