**EXAMPLE:** Use the formula for future value simple interest to find the indicated quantity.

A = 22135, P = 19000, t = 39 weeks and find r =?

**Solution:  A = P (1 + rt), Present Value**

**(A) = 22135, Principal**

**(P) = 19000, time**

**(t) = 39 weeks,**

**Rate (r) = ?**

22135 = 19000(1 + r(39/52))           **Convert time to decimal notation**

22135 = 19000(1 + 0.75r)               **Divide both sides by 19000 to isolate r**

22135/19000 = [19000(1 + 0.75r)]/19000     **Simplify both sides**

1.165 = 1 + 0.75r                            **Subtract one from both sides**

1.165 - 1 = 1 - 1 + 0.75r                   **simplifying both sides**

 0.165 = 0.75r

0.165/0.75 = 0.75/0.75r                          **Divide both sides by 0.75 to solve for r**

0.22 = r                                        **Convert your decimal value to percent by**

 **Multiplying value by 100**

 22% = r

**Make the indicated conversion. Assume a 360-day year as needed.**

1) 150 days to a simplified fraction of year

**Use I = Prt for simple interest to find the indicated quantity.**

2) I = $750, r = 6%, t = 6 months. Find P.

**Use the formula A = P(1 + rt) to find the indicated quantity.**

3) P = $7996; r = 6%; t = 10 months. Find A.

**Use the formula A = P(1 + rt) to find the indicated quantity.**

4) Allan borrowed $6300 from his father to buy a car. He repaid him after 9 months with interest of 11% per year. Find the total amount he repaid.

**Find the compound interest earned. Round to the nearest cent.**

5) $14,000 at 5% compounded annually for 3 years

**Provide an appropriate response. Round to answer to two decimal places.**

6) An investment company pays 7% compounded quarterly. What is the effective rate?

**Solve the problem. Round to the nearest cent as needed.**

7) The average cost of a 4-year college education is projected to be $130,000 in 16 years. How much money should be invested now at 6.5%, compounded quarterly, to provide $130,000 in 16 years?

**Solve the problem. Round to the nearest cent as needed.**

8) Sandra deposits $3000 in an ordinary annuity at the end of each semiannual period at 4% interest compounded semiannually. Find the amount she will have on deposit after 25 years.

**Find the future value of the ordinary annuity. Interest is compounded annually unless otherwise indicated.**

9) PMT = $7,500, i = 7% interest compounded semiannually for 5 years

**Find the monthly house payment necessary to amortize the following loan. Round the answer to the nearest cent.**

10) In order to purchase a home, a family borrows $267,000 at 10.8% for 15 yr. What is their monthly payment?