

Compound Interest Formula (Page 265)

$$A = P \left(1 + \frac{r}{m} \right)^{m \times t} = P(1+i)^n$$

A = the accumulated or future balance; P = the principal or present balance;
r = annual interest rate in decimal form; m = number of compounding periods per year;
t = time in years

$i = \frac{r}{m}$ = interest rate per period; n = mt = total number of interest periods

Continuous Compounding

$$A = Pe^{rt}$$

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#10) How much will be accumulated in an account if \$10,000 is deposited for 4 months

a) At 14% simple interest

b) At 14% compounded monthly

c) At 14% compounded daily

#34) Ramero plans to buy a new car three years from now. Rather than borrow at that time, he plans to invest part of a small inheritance at 7.5% compounded semiannually to cover the estimated \$6000 trade-in difference. How much does he need to invest if he starts investing now?

#40) How many years will be required to turn \$10,000 in to \$25,000 if the interest rate is 8% compounded quarterly?