Compounded Interest Formula

If r = annual rate
  n = number of times compounded per year (12, 365, etc.)
  P = initial deposit
  B = balance
  t = time

Equation for compounding:

Annually/Semiannually/Quarterly/Monthly/Daily/Hourly

Example 1:

Suppose Jake has $1000 that he invests in an account that pays 3.5% interest compounded quarterly. How much money does Jake have at the end of 5 years?

Example 2:

Elizabeth wants to save money so she can buy a car later in life. If she deposits money into an account that earns 4.8% interest compounded daily for 5 years, how much money did she start with if she ends up with $15,000 after 5 years?

Example 3:

ABC Bank is offering to double your money! They say that if you invest with them compounded quarterly they will double your money in 5 years. What is the rate of interest?