

16.4 – Compound Interest

Compound Interest Formula

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$

A = balance after “ t ” years

P = original amount invested

r = interest rate in decimal form

n = number of times per year interest is compounded

t = number of years interest is compounded

Change the following percents into decimal form.

1. 25%

2. 10.5%

3. 4.5%

Examples:

1. The amount of \$500 is deposited into an account that pays 9.5% compounded monthly. What is the balance in the account after 3 years?

2. How much would you deposit in an account that pays 6.5% interest, compounded semi-annually, to have a balance of \$5000 in 15 years?