Example 23.

Calculate the compound interest for a $1000 investment under the following conditions:

Interest rate: 5%

Investment Period: 10 years

Compounding: Daily

Solution.

Use the Compound Interest Formula and assign values to the variables. *P* is the principal, *r* is the interest rate, *n* is the number of compounding periods, and *t* is the investment period.

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

$$A = 1000 \bullet (1+\frac{0.05}{365.25})^{365.25 \bullet 5}$$

$$= 1648.65$$

***P* = $1000**

***r* = 0.05**

***n* = 365.25**

***t* = 10**