C H A P T E R   5

When using the TI-83 Plus or TI-84 Plus calculators you access *Finance* by pressing the APPS key.

Effective Annual Rate & Nominal Rate

The effective annual rate calculation provides a means of comparing the nominal rates of various financial instruments. The **Nom** and **Eff** functions convert from effective to nominal and nominal to effective rates.

Effective annual rate is the amount of simple interest that is equivalent to an interest rate compounded during a year. The effective rate is frequently needed in other computations and the TI-83 provides this calculation as a function that uses the formula

$$r = \left(1 + \frac{j}{m}\right)^m - 1$$

where	j	=	nominal rate
	m	=	number of compounding periods per year
	r	=	effective annual rate

Example 1:
Which provides a better yield, simple interest of 6.15% or interest of 6% compounded quarterly?

We need to compute the effective rate for 6% compounded quarterly.

(Figure 1)

1. Press 2nd [FINANCE] *(5A)*† and choose **C:Eff(** from the CALC menu. The **Eff(** function will be pasted on the Home Screen. (Figure 1)

2. The syntax is **Eff**(nominal rate,compounding periods per year). Complete the command by typing 6 , 4) ENTER. (Figure 2)

(Figure 2)

A rate of 6% compounded quarterly gives an effective rate of 6.14%, so simple interest of 6.15% provides a better yield.

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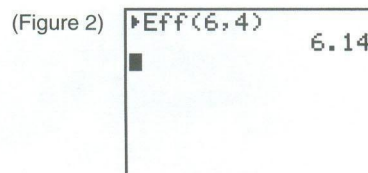
† **Refer to the section on Key Arrangement in Chapter 1 for an explanation of the key locator codes used in this manual.**

Note: If you know the effective rate of interest and the number of compounding periods, you can find the nominal rate of interest using the **Nom(** command.

Example 2:
What is the nominal interest rate if the effective annual yield is 6.14%
compounded quarterly?

The **Nom(** command computes the nominal interest rate. The syntax is **Nom(**effective rate,compounding periods). (Figure 3)

(Figure 3)
```
CALC VARS
7↑tnpv(
8:irr(
9:bal(
0:ΣPrn(
A:ΣInt(
B▶Nom(
C↓▶Eff(
```

The nominal interest rate is 6% compounded quarterly for 6.14%. (Figure 4)

(Figure 4)
```
▶Nom(6.14,4)
            6.00
```