

## Texas Instruments BAII PLUS Calculator

Your calculator can be your best friend on the CFA exam. This powerful machine can solve problems quickly. It has spreadsheets that can handle time value of money, statistics, and bond math. Best of all when you use these spreadsheets you can check your work.

Each question on the exam has one correct answer and three distractors. In questions with quantitative answers these distractors are specifically selected to reflect typical candidate mistakes. Under exam pressure many candidates have fallen prey to the thought: “My calculator and the exam agree – that must be the right answer.” You will find one correct and three incorrect – but plausible – answers for every question. Understanding how to use the calculator to check your answers can be one of your comparative advantages.

While your calculator can be your best friend, it can also be a distraction. Many times quantitative questions can be answered without any calculations. The unthinking candidates will plough ahead and make unnecessary calculations, wasting valuable time. If you think the question through, many times you can deduce the answer with little or no calculation. Recently the exam has emphasized thinking and understanding over routine calculations.

Here’s a quick example:

The range, mean absolute deviation, and variance of the population [10, 15, 20, 30] are, respectively, closest to:

- A. 20 19.0 55.0
- B. 20 6.3 9.3
- C. 30 12.2 55.0
- D. 30 12.2 9.3

Think this one through. There are only two possible values for the range: 20 and 30. A quick inspection of the numbers reveals the range is 20 (30 minus 10). You might be able to tell that the variance (the average sum of *squared* deviations) has to be larger than 9.3 and the answer is A. If your intuition fails, you can quickly calculate the variance with your calculator – we will show you how in this guide. Calculating the mean absolute deviation is irrelevant and would have been a big waste of time.

Candidates who are already in the investment profession are used to solving quantitative problems with Bloomberg<sup>®</sup> or Excel<sup>®</sup>. Switching to calculators takes practice but we promise you practice will give you a comparative advantage.

This guide is specifically designed to help you work quantitative problems on the CFA exam. The calculator can do other things, too. You’ll find the full array of capabilities in




the instruction manual that came with the calculator. Unless you're just curious, we suggest you focus on solving CFA problems first.

To begin, look at the face of the calculator. Almost every key on the BAI PLUS has two functions: each key's primary function is noted on the key itself, while each key's secondary function is noted in white above the key. To use the function on the key, simply press the key. To access the white function above each key, first press the gray key with "2<sup>nd</sup>" printed on it, which we will call the "2<sup>nd</sup> shift" key, and then press the desired function key. (Note that the 2<sup>nd</sup> shift key is near the upper left corner of the calculator keyboard.)

### *Turning the Calculator On and Off*

To turn on the calculator, press . To turn off the calculator, press .





Note that the "ON/OFF" key is on the upper right corner of the keyboard. Also, we will designate keys throughout this tutorial by the use of small boxes, as above. To conserve the battery, the calculator turns itself off about 10 minutes after your last keystroke.





Also, note that pressing the 2<sup>nd</sup> shift key places a little "2<sup>nd</sup>" symbol in the upper left corner of the display. Press the 2<sup>nd</sup> shift key again and the symbol goes away. The  key is a toggle key that switches back and forth between the "regular" and the "2<sup>nd</sup>" functions.  acts like a shift key; to access the functions above the keys press .







**NOTE** this calculator has a continuous memory, so turning it off does **not** affect any data stored in the calculator, but it will erase any number showing on the screen. This can be disastrous. Get in the habit of clearing your calculator every time you make a calculation.

### **Clearing the Calculator**


Five of the most commonly used methods of clearing data are:


    clears all 10 memory locations and the display but **none** of the embedded worksheets.

    2<sup>nd</sup> Quit ensures the calculator is in standard mode and 2<sup>nd</sup> CLRTVM clears the TVM worksheet by setting N, I/Y, PV, PMT and FV to zero. This worksheet is independent of memory and the other worksheets.

  clears the cash flow, data, and bond worksheets **only** when you are in those worksheets. Clearing a worksheet does not clear any other worksheet. For example enter    to clear the cash flow worksheet or 

   to clear the data worksheet.

 clears the entire display, but **not** memory.


 clears numbers on the display one at a time if you made a mistake.

Occasionally, you may purposely want to save data, but, in general, you will be entering all new data, so starting with a clear memory is the safest approach. Use the following sequence and you can't go wrong:



You don't need these keystrokes for most problems but if you use this sequence when you turn on your calculator you won't forget to clear the memory register. Worksheets are not affected by these keystrokes.


### *Changing the Display*

To change decimals from 2 to 4, press . 0.0000 is displayed.


To change from 4 places to 2, press . 0.00 is displayed.

Set your display to 4 places, which is especially convenient when working with interest rates and rates of return that are entered as decimals.

### *Periods per Year Setting*


One important setting that can cause problems is the periods per year setting. To check the current setting, press . The display shows the setting for periods/year. The calculator comes pre-set at 12 compounding periods per year, that is, it assumes calculations will be done on a monthly basis. However, CFA exam problems generally use 1 compounding per period or year. To change to 1 compounding per period:

Press .

Now the calculator is set to assume 1 compounding per period. To confirm this setting, press . Unless needed for other work, leave the calculator setting at 1 period per year.

### *Simple Time Value of Money (TVM) Problems*

The TVM keys are located on the third row from the top of the keyboard.



TVM problems usually involve four variables—three are known and the fourth is unknown. You can expect two or three time value of money problems on the exam. With your calculator, these will be easy points to score. We could use the embedded spreadsheets for simple problems but we'll show you the shortcut first. You will be able to review your work and you will be fast.

### Lump Sums

To begin, consider TVM calculations with single (lump) sums. If you know any three variables, you can find the value of the fourth.

#### Example 1:

The FV of \$100 after 3 years if the interest rate is 26 percent is closest to? First, clear the time value of money registers by pressing **2<sup>nd</sup> QUIT 2<sup>nd</sup> CLR TVM**. Remember that **2<sup>nd</sup> Quit** ensures the calculator is in standard mode.

Next, enter the following data:

You Enter	Calculator Responds
3 <b>N</b>	<b>N = 3.0000</b>
26 <b>I/Y</b>	<b>I/Y = 26.0000</b>
0 <b>PV</b>	<b>PV = 0.0000</b>
100 <b>PMT</b>	<b>PMT = 100.0000</b>
0 <b>FV</b>	<b>FV = 0.0000</b>

To determine the FV press **CPT FV** and the FV of -\$384.7600 is displayed.

You may find it helpful to use the same keypad sequence: **N**, **I/Y**, **PV**, **PMT**, and **FV**, for every time value of money problem. That way, you won't forget a step. You can enter a zero for the value you are going to compute – the calculator knows the difference between entering a zero and being asked to compute an answer.

The BAI PLUS is programmed so that if the PV is positive (+) then the FV is displayed as negative (-) and vice versa, because the BAI PLUS assumes that one is an inflow and the other is an outflow. When entering both PV and FV, one must be entered as negative and the other as positive.

Before you clear your calculator you can check to be sure you have the right inputs. Press **RCL** **N** to see that the number of period was really 3, **RCL** **I/Y** to see that the interest rate was 26, and so on. If you find you entered the wrong number, don't start over. You can enter the correct number by repeating the sequence. If you entered 4 periods instead of 3 press 3 **N** and the error is corrected. Check your other inputs and recalculate by pressing **CPT** **FV**.

*Example 2:*

The PV of \$500 due in 5 years if the interest rate is 10 percent is closest to? Clear first and then enter the following data.

<b>You Enter</b>	<b>Calculator Responds</b>
5 <b>N</b>	<b>N = 5.0000</b>
10 <b>I/Y</b>	<b>I/Y = 10.0000</b>
0 <b>PV</b>	<b>PV = 0.0000</b>
0 <b>PMT</b>	<b>PMT = 0.0000</b>
500 <b>FV</b>	<b>FV = 500.0000</b>

Pressing **CPT** **PV** reveals that the present value of \$500 in 5 years at a 10 percent rate is \$310.4607.

*Example 3:*

The exam often asks a question about compound growth rates as they are a primary tool of the financial analyst. Remember that interest rates and growth rates are the same thing and you can use the calculator to solve for either one.

If \$310.46 grows to \$500 in 5 years, the compound growth rate is closest to? Clear first and then enter:

<b>You Enter</b>	<b>Calculator Responds</b>
5 <b>N</b>	<b>N = 5.0000</b>
0 <b>I/Y</b>	<b>I/Y = 0.0000</b>
310.46 <b>PV</b>	<b>PV = 310.4600</b>

0 **PMT**

**PMT = 0.0000**

500 **FV**

**FV = 500.0000**

Press **CPT** **I/Y** to see the answer. Did you see Error 5? Of course you did. Use this example to remember that either the PV or the FV **must** be negative. Try again:

5 **N**

0 **I/Y**

-310.46 (The **+/-** key changes the sign.) **PV**

0 **PMT**

500 **FV**

Press **CPT** **I/Y** to see that the answer is indeed 10.000%.

Unless otherwise instructed, assume the present value is negative.

*Example 4:*

Assume a bond can be purchased today for \$200. It will return \$1,000 after 14 years. The bond pays no interest during its life. The rate of return you would earn if you bought the bond is closest to? Clear first then enter:

14 **N**

0 **I/Y**

200 **+/-** **PV** (Use the **+/-** to change the sign.)

0 **PMT**

1000 **FV**

Press **CPT** **I/Y** and the BAI PLUS calculates the rate of return to be 12.1828 %.

Remember that the BAI PLUS is programmed so that if the PV is + then the FV is displayed as - and vice versa because the BAI PLUS assumes that one is an inflow and other is an outflow.

Now suppose you learn that the bond will actually cost \$300. What rate of return will you earn?

**Override** the -200 by entering 300 **+/-** **PV**, then press **CPT** **I/Y** to get 8.9804%. If you pay more for the bond, you earn less on it. The important thing, though, is that you can do “what if” analyses with the calculator.

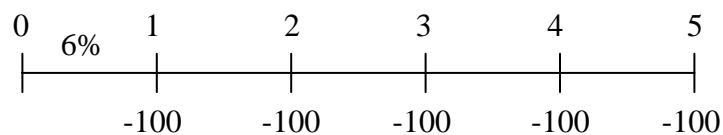
Now, do nothing except press **ON / OFF** to turn off the calculator. Then turn on the calculator **ON / OFF**. The display shows 0.0000. Is the memory erased? Not completely. What was on the screen is gone, but press **RCL** **N** to get N = 14. Use this as a lesson to remember that the memory is not erased when you turn the calculator off.

Have you ever gotten a ridiculous answer? First, you have to use your intuition to know it’s ridiculous. In this problem let’s say your calculator responded with 146.1941 – percent per year! That cannot be true and yet your calculator says it is. The first thing to check is the periods per year setting. Press **2<sup>nd</sup>** **P/Y** and make sure the compounding periods per year are set to one. That will almost always be the source of ridiculous answers.

### Ordinary Annuities

*Example 1:*

The FV of an annuity of \$100 paid at the end of each year for 5 years if the interest rate equals 6 percent is closest to?



Clear first then enter the following data:

5 **N**  
 6 **I/Y**  
 0 **PV**  
 100 **+/-** **PMT**

0 **FV**

Now press **CPT** **FV**, and the FV of \$563.7093 is displayed.

*Example 2:*

What is the PV of the same annuity?

Leave data in calculator, but enter 0 as the FV to override, then press **CPT** **PV** to get a PV of \$421.2364.

### **Annuities Due**

Each payment of an annuity due occurs at the beginning of the period instead of at the end, as with an ordinary annuity. In essence, each payment is shifted back one period. To analyze an annuity due press **2<sup>nd</sup>** **BGN** **2<sup>nd</sup>** **SET** **CE / C**. “BGN” appears on the screen and in the upper right corner of the display. Now the BAI PLUS analyzes the cash flows based on beginning of period payments. Change back to end mode by pressing **2<sup>nd</sup>** **BGN** **2<sup>nd</sup>** **SET** **CE / C**.

### **Interest Conversion**

The following equation is used to convert a nominal rate to an effective annual rate (EAR).

$$\text{EAR} = \left[ 1 + \frac{k_{\text{Nom}}}{m} \right]^m - 1.$$

Given:  $k_{\text{Nom}} = 10\%$  and  $m = 12$  payments/year,

$$\text{EAR} = \left[ 1 + \frac{0.10}{12} \right]^{12} - 1 = (1.0083)^{12} - 1 = 1.1047 - 1 = 0.1047 = 10.47\%.$$

However, it's much easier to convert the nominal rate using the calculator.

First we need to set the calculator to 12 payments per year:

**2<sup>nd</sup>** **I CONV** **↑** 12 **ENTER** **↓** 10 **ENTER** **↓** **CPT**.

The effective annual rate of 10.4713% is displayed on the screen.

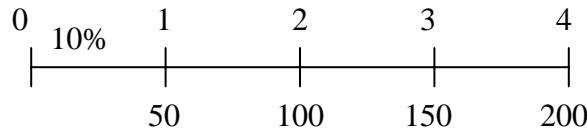
### ***Embedded TVM Spreadsheet Operations***

More complicated time value of money problems utilize the full power of the calculator's TVM spreadsheet. You could solve these by repeating the techniques above, but you would be much more likely to make a mistake.

*Example 1: Uneven Cash Flows*

You can find the PV, FV, **and** IRR (internal rate of return) of a series of unequal cash flows by entering the flows only once.

Assume the following cash flows:



The PV of these CFs is closest to?

First, clear the cash flow worksheet by entering:

**CF** **2<sup>nd</sup>** **CLRWORK**. The calculator responds with **CF<sub>0</sub>= 0.0000**.

You can only clear the cash flow worksheet from within the worksheet.

Then enter the cash flows:

Note: The display at the top of the calculator lists the options available at that step. After you enter **CF** you should see **ENTER** – the available keystrokes at this step.

You Enter	Calculator Responds
0 <b>ENTER</b>	<b>CF<sub>0</sub>= 0.0000</b>
Sets CF <sub>0</sub> equal to 0.	

Note: Two options are added to the display: DEL and INS, allowing you to Delete or Insert a cash flow at this point.

	<b>C01= 0.0000</b>
Moves to CF <sub>1</sub> .	
50 <b>ENTER</b>	<b>C01= 50.0000</b>
Sets CF <sub>1</sub> equal to 50.	
	<b>F01= 1.0000</b>
Moves to frequency of occurrence of CF <sub>1</sub> . Default frequency is 1.	



C02= 0.0000

Tells calculator that CF<sub>1</sub> (the first cash flow) occurs only once and calculator is ready for the second cash flow.

100

ENTER

C02= 100.0000

Sets CF<sub>2</sub> equal to 100.



F02= 1.0000

Moves to frequency of occurrence of CF<sub>2</sub>.



C03= 0.0000

Tells calculator that the CF occurs only once.

150

ENTER

C03= 150.0000

Sets CF<sub>3</sub> equal to 150.



F03= 1.0000

Tells calculator that this CF occurs only once.



C04= 0.0000

200

ENTER

C04= 200.0000

Sets CF<sub>4</sub> equal to 200.



F04= 1.0000

All CFs are entered. Now activate time value of money calculation mode:



I = 0.0000

Calculator enters time value of money calculation mode. Enter the interest (discount) rate.

10

ENTER

I = 10.0000



NPV= 0.0000

At this point the BAI PLUS knows the cash flows, the number of periods, and the interest rate. To find the PV, press **CPT** to get  $PV = NPV = \$377,399.1$ .<sup>1</sup>

**CPT**

**NPV= 377.3991**

Check your entries against the original problem by pressing **CPT** and using the arrows to review your cash flows:

**CF**

↓

↓

↓

↓

↓

↓

↓

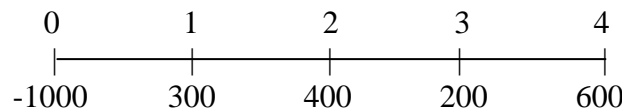
<b>CF<sub>0</sub>=</b>	<b>0.0000</b>
<b>C01=</b>	<b>50.0000</b>
<b>F01=</b>	<b>1.0000</b>
<b>C02=</b>	<b>100.0000</b>
<b>F02=</b>	<b>1.0000</b>
<b>C03=</b>	<b>150.0000</b>
<b>F03=</b>	<b>1.0000</b>
<b>C04=</b>	<b>200.0000</b>

You can change, insert or delete any cash flow entry and recompute.

The IRR button calculates the Internal Rate of Return. Without clearing the calculator, press **CPT** **IRR** **CPT**. Did you get Error 5? You should. IRR is only possible when the cash flow sequence changes sign at least once.

*Example 2: The Rate of Return of an Investment (IRR)<sup>2</sup>*

Assume that we invest \$1,000 today (t = 0) and then expect to receive an uneven set of cash flows. Here is the CF time line:



The rate of return we will earn is closest to?

First, enter:

**CF** **2<sup>nd</sup>** **CLRWORK**





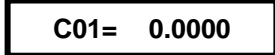

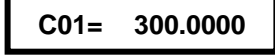

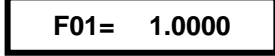

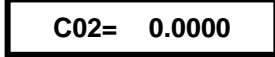



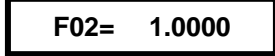

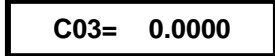

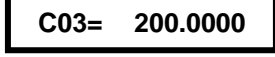

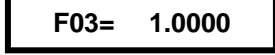

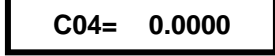

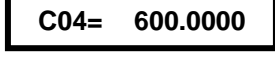
The calculator responds with

**CF<sub>0</sub>= 0.0000**

<sup>1</sup> For our purposes we consider the present value and the net present value (NPV) the same.

<sup>2</sup> If a negative CF occurs at the end of a project's life, or if a sequence of cash flows has two or more sign changes, there may be multiple IRR solutions. You are unlikely to encounter this situation on the exam.

Next, enter the cash flows:

	<b>You Enter</b>	<b>Calculator Responds</b>
1000	 	
	Sets CF <sub>0</sub> equal to -1000.	
		
	Moves to CF <sub>1</sub> .	
300		
	Sets CF <sub>1</sub> equal to 300.	
		
	Moves to frequency of occurrence of CF <sub>1</sub> . Default frequency is 1.	
		
	Tells calculator that CF <sub>1</sub> (the first cash flow) occurs only once and calculator is ready for the second cash flow.	
400		
	Sets CF <sub>2</sub> equal to 400.	
		
	Moves to frequency of occurrence of CF <sub>2</sub> .	
		
	Tells calculator that the CF occurs only once.	
200		
	Sets CF <sub>3</sub> equal to 200.	
		
	Tells calculator that this CF occurs only once.	
		
600		
	Sets CF <sub>4</sub> equal to 600.	



F04= 1.0000

Now the BAI PLUS knows the cash flows. Press **IRR** **CPT** and the IRR of 16.7053 percent is displayed.

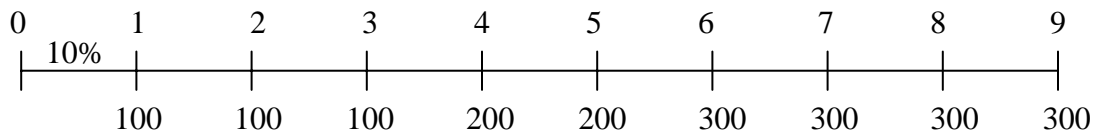
You can also determine the NPV of this project. Leave the data as entered and press **NPV**. The calculator responds with I = 0.0000. Enter the opportunity cost interest rate, say 8 percent:

8 **ENTER** then press **↓** **CPT**.

The NPV of \$220.4977 is displayed. Thus, the PV of the cash inflows exceeds the cost of the investment by \$220.4977.

### Example 3: Embedded Annuities

The Cash Flow worksheet comes in really handy when you have embedded annuities:



The PV of these cash flows is closest to?

Clear by using **CF** **2<sup>nd</sup>** **CLRWORK** and the calculator responds with

**CF<sub>0</sub>= 0.0000**

. Begin entering the cash flows:

0 **ENTER** **↓** Sets CF<sub>0</sub> equal to 0 and moves to CF<sub>1</sub>.

100 **ENTER** **↓** Sets CF<sub>1</sub> equal to 100 and moves to frequency of occurrence of CF<sub>1</sub>.

3 **ENTER** **↓** Tells calculator that the \$100 CF occurs three consecutive times.

200 **ENTER** **↓**

2 **ENTER** **↓**

300 **ENTER** **↓**  
 4 **ENTER**

Now the BAI PLUS knows the cash flows. Thus, enter the interest rate:

**NPV** 10 **ENTER** **↓**

At this point the BAI PLUS knows the cash flows, the number of periods, and the interest rate. To find the PV, press **CPT** to get  $PV = NPV = \$1,099.9433$ .

To check your entries, press:

<b>CF</b>	<b>CF<sub>0</sub>= 0.0000</b>
<b>↓</b>	<b>C01= 100.0000</b>
<b>↓</b>	<b>F01= 3.0000</b>
<b>↓</b>	<b>C02= 200.0000</b>
<b>↓</b>	<b>F02= 2.0000</b>
<b>↓</b>	<b>C03= 300.0000</b>
<b>↓</b>	<b>F03= 4.0000</b>

### ***Embedded Statistical Spreadsheet Operations***

The BAI PLUS can also be used for several types of statistical calculations.

#### **Mean and Standard Deviation**

<u>Year</u>	<u>Sales</u>
1999	\$150
2000	95
2001	260

The mean (average) and standard deviation ( $\sigma$ ) of sales over the 3 years is closest to?

First select the data-entry portion of the statistics worksheet by pressing **2<sup>nd</sup>** **DATA** then clear any previous data entries, **2<sup>nd</sup>** **CLRWORK**. As before, the statistics worksheet can only be cleared from within that worksheet. The calculator responds with

**X01= 0.0000**

Next, enter the data:

**You Enter**

**The Calculator Responds**

150

**ENTER**

**X01= 150.0000**

This enters 150 as the first data point.

**↓**

**Y01= 1.0000**

This is where you would enter a Y variable, if the problem called for one.

**↓**

**X02= 0.0000**

This tells the calculator there is no Y variable associated with the X variable.

95

**ENTER**

**X02= 95.0000**

This enters 95 as the second data point.

**↓**

**Y02= 1.0000**

This tells the calculator there is no Y variable associated with the X variable.

**↓**

**X03= 0.0000**

260

**ENTER**

**X03= 260.0000**

This enters 260 as the third data entry.

**↓**

**Y03= 1.0000**

This tells the calculator there is no Y variable associated with the X variable.

Now select the statistical calculation portion of the statistics worksheet by pressing

**2<sup>nd</sup>**

**STAT**

then clear any previous statistical entries, **2<sup>nd</sup> CLRWORK**.

“LIN” (which stands for linear regression) should now be displayed on the screen. Press the down arrow to view the results:

**↓**

**n 3.0000**

sample size, n,

**↓**

**$\bar{X}$  = 168.3333**

mean,  $\bar{x}$ ,



**Sx = 84.0139**

sample standard deviation, Sx



**$\sigma_x = 68.5971$**

and population standard deviation,  $\sigma_x$ .

Let's try that problem again with an additional set of sales figures:

Year	Product X Sales	Product Y Sales
1999	\$150	\$200
2000	95	175
2001	260	300

Now, enter the Y product data: Press **2<sup>nd</sup>** **DATA**. Do **not** clear any previous entries.

**You Enter**

**The Calculator Responds**



**X01= 150.0000**

We previously entered 150 as the first Product X data point.



**Y01= 1.0000**

Enter the first Y data point.

200 **ENTER**

**X02= 200.0000**



**X02= 95.0000**

95 is still the second Product X data point.



**Y02= 1.0000**

Enter the second Product Y data point.

175 **ENTER**

**Y02= 175.0000**



**X03= 260.0000**

260 is the third Product X data point.



**Y03= 1.0000**

300 **ENTER**

**Y03= 300.0000**

Enter the third Product Y data point.

Now open the statistical calculation portion of the statistics worksheet by pressing

**2<sup>nd</sup>**

**STAT**

. Do **not** clear any previous entries.

“LIN” again should be displayed on the screen. Press the down arrow and you will see:



**n 3.0000**

sample size, n,



**$\bar{X} = 168.3333$**

mean of x,  $\bar{x}$ ,



**Sx = 84.0139**

sample standard deviation of x, Sx



**$\sigma_x = 68.5971$**

and population standard deviation of x,  $\sigma_x$ .



**$\bar{y} = 225.0000$**

mean of y,  $\bar{y}$ ,



**Sy = 66.1438**

sample standard deviation of y, Sy



**$\sigma_y = 54.0062$**

and population standard deviation of y,  $\sigma_y$ .

Now the calculator runs through the regression parameters as you continue to press the down arrow: the intercept (a), 93.8312, the slope (b), 0.7792, and the correlation coefficient (r), 0.9897. Then you can forecast the next observation, based on the relationship between X and Y. You should not need this capability on the exam. The only statistic you could potentially need to compute in this sequence is the correlation coefficient which, when squared, is the regression's  $R^2$ .

Although your calculator will perform a regression, as we have seen, the emphasis on the exam is most likely to be interpreting the results of a regression rather than computing one. Don't waste your time learning how to run regressions on your calculator for the exam.

### ***Embedded Bond Spreadsheet Operations***

Bond pricing calculations are fair game at Level I. Your calculator contains a spreadsheet that will compute a variety of bond-related measures. Consider the question:

The Thomas Company has outstanding annual pay bonds with 20 years to maturity carrying a 6% coupon that sell for \$894. If the par value is \$1000, the pre-tax yield on these bonds is closest to?

One way to solve the problem is to use the simple time value of money approach:

First, clear the calculator **2<sup>nd</sup> QUIT 2<sup>nd</sup> CLR TVM**.

Next, enter the following data:

20	<b>N</b>
0	<b>I/Y</b>
894	<b>+/- PV</b>
60	<b>PMT</b>
1000	<b>FV</b>

To determine the yield press **CPT I/Y** and the yield of 7.0006 is displayed. Note this is an annual pay bond. If the bond pays semiannually multiply the periods by two and divide the coupon by two. Multiply the resulting yield by 2 to get the annual yield:

40	<b>N</b>
0	<b>I/Y</b>
894	<b>+/- PV</b>
30	<b>PMT</b>
1000	<b>FV</b>

To determine the yield, press **CPT** **I/Y** and multiply the result, 3.4961, by 2 to get 6.9921.

You could also use the bond spreadsheet:

Enter **2<sup>nd</sup>** **Bond** **2<sup>nd</sup>** **CLRWORK** to clear the bond worksheet. The calculator responds with **SDT= 12-31-1990**. TI uses the month-day-year convention.

**You Enter**

**The Calculator Responds**

1.0100 **ENTER**

**SDT= 1-01-2000**

This is the sale date and is arbitrary.

**↓**

**CPN= 0.0000**

60 **ENTER**

**CPN= 60.0000**

**↓**

**RDT= 12-31-1990**

1.0120 **ENTER**

**RDT= 1-01-2020**

Set the redemption date exactly 20 years after the sale date.

**↓**

**RV= 100.0000**

1000 **ENTER**

**RV= 1000.0000**

Sets the redemption value at 1000.

**↓**

**ACT**

Uses actual day count method. For the CFA exam this setting is not important enough to change.

**↓**

**2/Y**

Semiannual payments.

1 **2<sup>nd</sup>** **SET**

**1/Y**

Uses annual payments.

**↓**

**YLD= 0.00**

Skip over the yield calculation for now.

**↓**

**PRI= 0.00**

894 **ENTER**

**PRI= 894.0000**

Enter current price.

**↑**

**YLD= 0.0000**

Return to yield calculation.

CPT

YLD= 7.0006

For simple pricing problems, we recommend the simple time value of money approach. The bond spreadsheet could come in handy if you are asked to compare two bonds that are similar in every respect, save one.

This completes the TI BAI Plus calculator tutorial. Use this calculator every day if possible so that by exam time you are fluent in its abilities and confident in its answers.