

CellSheet™ App

TI-84 Plus

TI-89
Titanium

Voyage™ 200

This App provides the capabilities of a spreadsheet on TI graphing handhelds, eliminating the need for a computer lab to complete many assignments. In addition, this robust tool gives users the ability to enter data and text in cells, create cell formulas, and use built-in functions in cells.

Example 1: Simple Compound Interest

1 Choose CellSheet from the APPS menu. The splash screen will pop up first. Press any key other than [2nd] [QUIT].



2 The Help screen will appear. Note that the function keys enable spreadsheet functionality, such as Select Range, Cut, Copy, Paste, and open menus. The [STO→] and [RCL] keys are overwritten to provide quick access to common spreadsheet characters (= to start formula, \$ to add absolute reference).

| S01 | A | B | C |
|-----|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

3 Press any key for the spreadsheet to appear. Note the edit line with the cell reference on the left side and the Menu soft key above [F5]. Press the arrows to show that the cursor moves from cell to cell. The cell reference at the left side of the edit line changes as the cursor moves around. Use [ALPHA] with the arrow keys to move up/down/left/right one page at a time. Use the arrow keys to move into a row/column heading to select the entire row/column or into the very top left corner to show the filename on the edit line.

| S01 | A | B | C |
|-----|------|---|---|
| 1 | 1000 | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

4 Scroll to cell A1. Press [ENTER]. The cursor is active on the edit line, and the Menu soft key disappears so you can use the entire edit line. Type in a principal amount, for example, 1,000. Simply type the number in and press [ENTER].

| S01 | A | B | C |
|-----|------|---|---|
| 1 | 1000 | | |
| 2 | .06 | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

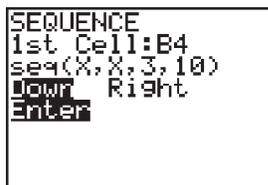
5 The cursor has moved down to cell A2. Now type in an annual interest rate, for example, .06. Press [ENTER].

| S01 | A | B | C |
|-----|------|------|---|
| 1 | 1000 | YEAR | |
| 2 | .06 | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

6 Create a column for time. Scroll to cell B1 and type "YEAR" (using the [ALPHA] key or Alpha Lock as needed). The quotation mark tells CellSheet that this should be treated as text rather than as a variable. Press [ENTER].

| S01 | A | B | C |
|-----|------|------|---|
| 1 | 1000 | YEAR | |
| 2 | .06 | 1 | |
| 3 | | 2 | |
| 4 | | | |
| 5 | | | |
| 6 | | | |

7 In cell B2, press 1 to designate year 1. Press [ENTER] to move to cell B3. Type the first formula, [STO→] (to get =) [ALPHA] B2 + 1. Press [ENTER]. The cell should return the value 2. Press the up arrow to see that the formula is still on the edit line for that cell.



8 Copy the above formula down. Or, create a sequence using the Sequence option from the Options menu. Press [F5] to open the Menu. Choose 3:Options..., then 3:Sequence.... The input screen should appear. Fill in the fields as indicated in the screen. Scroll to the Enter area and press [ENTER].

| S01 | A | B | C |
|-----|------|------|---|
| 1 | 1000 | YEAR | |
| 2 | .06 | 1 | |
| 3 | | 2 | |
| 4 | | 3 | |
| 5 | | 4 | |
| 6 | | 5 | |

9 A sequence from 3 to 10 fills in from cell B4 down.

| S01 | A | B | C |
|-----|------|------|-----|
| 1 | 1000 | YEAR | BAL |
| 2 | .06 | 1 | |
| 3 | | 2 | |
| 4 | | 3 | |
| 5 | | 4 | |
| 6 | | 5 | |

C2: [Menu]

10

Create a column for the balance. Scroll to cell C1 and type "BAL" (using the [ALPHA] key or Alpha Lock as needed). Press [ENTER].

| S01 | A | B | C |
|-----|------|------|------|
| 1 | 1000 | YEAR | BAL |
| 2 | .06 | 1 | 1060 |
| 3 | | 2 | |
| 4 | | 3 | |
| 5 | | 4 | |
| 6 | | 5 | |

[Range] [Paste] [Menu]

12

To watch the balance grow over time, copy cell C2 and paste it to the range C3:C11. Scroll to cell C2. Press [F3] to copy the cell.

| S01 | A | B | C |
|-----|------|------|-----|
| 1 | 1000 | YEAR | BAL |
| 2 | .06 | 1 | |
| 3 | | 2 | |
| 4 | | 3 | |
| 5 | | 4 | |
| 6 | | 5 | |

C2: =\$A\$1*(1+\$A\$2)^B2

11

For the balance at the end of year 1, use the formula $=\$A\$1*(1+\$A\$2)^B2$ (remember [STO] for = and [2nd] [RCL] for \$). The \$ signs must be used because in order to copy the formula down the column, there is a need to create an absolute reference to cells A1 and A2 to make sure that the original principal and interest rate are the same in every copied formula. Press [ENTER].

| S01 | A | B | C |
|-----|---|----|--------|
| 6 | | 5 | 1338.2 |
| 7 | | 6 | 1418.5 |
| 8 | | 7 | 1503.6 |
| 9 | | 8 | 1593.8 |
| 10 | | 9 | 1689.5 |
| 11 | | 10 | 1790.8 |

C11: =\$A\$1*(1+\$A\$2)^B2

13

Scroll to cell C3. Press [F1] to choose a range to copy to. Use the down arrow to select the range C3:C11. Press [F4] to paste to this range.

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After watching the balance grow a bit, see what happens by changing the interest rate in cell A2. Simply scroll to cell A2, change the number and watch all the balance values update. Or change the principal. Experiment!