

TI Technology Guide for Home Sales Boom

TI-83 Plus and TI-84 Plus Families

Creating a spreadsheet using the Cellsheet™ Application

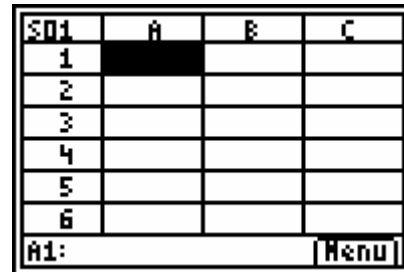
Starting the Application

Press **[APPS]** to display the list of applications on your calculator. From the APPLICATIONS list, select Celsheet. Press any key to bypass the Introduction screen. Note the keystroke information for entering cell information and navigating within the spreadsheet on the Help screen. Press any key to display a new spreadsheet or the last spreadsheet that was opened.

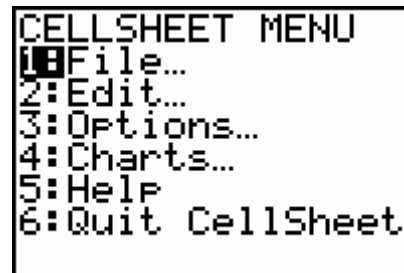


Creating a new spreadsheet

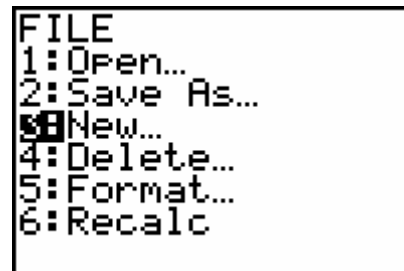
Find the Menu icon at the bottom right of the screen and press **[GRAPH]** to select Menu.



Select 1:File



Select 3:New



TI Technology Guide for Home Sales Boom

TI-83 Plus and TI-84 Plus Families

Name the new spreadsheet Payment and press

[ENTER] twice.



To enter text for the spreadsheet columns, move the cursor to cell A1. Press **[ALPHA]**" and type column heading **LA for Loan Amount** and press **[ENTER]**.

Continue in cells B1 through I1 using the following labels:

30IR = **30-yr interest rate**

30MP = **30-yr monthly payment**

30TAP = **30-yr total amount paid**

15IR = **15-yr interest rate**

15MP = **15-yr monthly payment**

15TAP = **15-yr total amount paid**

R30L = **Ratio of 30-yr total to Loan Amount**

R15L = **Ratio of 15-yr total to Loan Amount**

PAYM	A	B	C
1	LA	30IR	30MP
2			
3			
4			
5			
6			

A1: "LA" [Menu]

Remember to indicate that an entry is a text string press

[ALPHA] " to begin the text.

Move the cursor to cell A2 and enter 182,400 which is the median price of a home in May and press

[ENTER]. Then move to A3 and enter 191,800 which is the June median price of a house and press **[ENTER]**

PAYM	A	B	C
1	LA	30IR	30MP
2	182400		
3	191800		
4			
5			
6			

A4: [Menu]

Move to B2 and enter the 30-yr interest rate found in USA TODAY (the interest rates used were found in the Money Section of the September 2, 2004 USA TODAY).

PAYM	A	B	C
1	LA	30IR	30MP
2	182400	.0582	
3	191800		
4			
5			
6			

B3: [Menu]

TI Technology Guide for Home Sales Boom

TI-83 Plus and TI-84 Plus Families

Enter the 15-yr interest rate in cell E2. Express both interest rates as decimals.

PAYM	C	D	E
1	30MP	30TAP	15IR
2			.0521
3			
4			
5			
6			
E3:			[Menu]

Formulas are entered into a cell by pressing **[STO▶]** to insert an equal sign and then typing the formula. Move to cell C2 and enter the following formula to calculate the payment per month.

$$A2*(B2/12)/(1-(1+(B2/12))^{-360})$$

To complete the input in any cell, press **[ENTER]**

PAYM	A	B	C
1	LA	30IR	30MP
2	182400	.0582	1072.6
3	191800		
4			
5			
6			
C2: =A2*(B2/12)/(1-(1+(B2/12))			[Menu]

Move to cell F2 and use the same formula to calculate the monthly payment but change the cell reference for the interest rate change and the value for t is 180.

PAYM	D	E	F
1	30TAP	15IR	15MP
2		.0521	1462.4
3			
4			
5			
6			
F2: =A2*(E2/12)/(1-(1+(E2/12))			[Menu]

Move to cell A4 and enter eight additional loan amounts ranging from \$100,000 to \$500,000. The screen at the right represents possible values but choose your own.

PAYM	A	B	C
2	182400	.0582	1072.6
3	191800		
4	225000		
5	500000		
6	125000		
7	234045		
C7:			[Menu]

TI Technology Guide for Home Sales Boom

TI-83 Plus and TI-84 Plus Families

To determine the total amount paid over the term of the mortgage move the cursor to D2 and enter as a formula $C2*360$. Don't forget to start any formula with an equal sign. Move to G2 and enter the appropriate formula to calculate the total amount paid during the 15 year loan.

PAYM	D	E	F
1	30TAP	15IR	15MP
2	385122	.0521	1462.4
3			
4			
5			
6			
D2: =C2*360			[Menu]

You can change the number of decimal places displayed in each column by pressing **GRAPH** to select Menu. Press **3** to select Options...from the CELLSHEET MENU or move the cursor down to highlight 3:Options...and press **ENTER**.

```

CELLSHEET MENU
1:File...
2>Edit...
3:Options...
4:Charts...
5:Help
6:Quit CellSheet
    
```

In the OPTIONS screen select 6:Col Decimal...

```

OPTIONS
1:Statistics...
2:Fill Range...
3:Sequence...
4:Import/Export...
5:Sort...
6:Col Decimal...
    
```

Enter column reference by pressing **ALPHA** H and set the decimal mode to 2 by pressing **2** **▶** to highlight 2. This means that column H will be rounded to 2 decimal places. After changing the decimal setting press **ENTER** twice to complete the change for column H and return to the spreadsheet. Repeat the same procedure for column I.

```

COL DECIMAL
Col:H
Float 012345
Enter
    
```

TI Technology Guide for Home Sales Boom

TI-83 Plus and TI-84 Plus Families

In H2 enter the formula D2/A2. Move to I2 and enter G2/A2.

PAYM	F	G	H
1	15MP	15TAP	R30L
2	1462.4	263239	2.12
3			
4			
5			
6			
H2: =D2/A2			[Menu]

Move the cursor to B2. To copy the formula down through B11 press **ZOOM** to select Copy. Press **Y=** to select Range and use the down arrow key **↓** to highlight the cells through B11.

PAYM	A	B	C
1	LA	30IR	30MP
2	182400	.0582	1072.6
3	191800		
4	225000		
5	500000		
6	125000		
[Range]		[Paste]	[Menu]

PAYM	A	B	C
7	234045		
8	250000		
9	300100		
10	100000		
11	165500		
12			
B2:B11		[Paste]	[Menu]

Press **TRACE** to Paste the formula in the selected cells.

PAYM	A	B	C
8	250000	.0582	
9	300100	.0582	
10	100000	.0582	
11	165500	.0582	
12			
13			
B11: .0582		[Menu]	

TI Technology Guide for Home Sales Boom

TI-83 Plus and TI-84 Plus Families

Repeat the copy/paste procedure for the remaining columns. The screen shot at the right is showing the last three columns in the spreadsheet.

MOET	G	H	I
7	337773	2.12	1.44
8	360799	2.12	1.44
9	433103	2.12	1.44
10	144320	2.12	1.44
11	238849	2.12	1.44
12			
I11: =G11/A11			Menu