BA-35 Solar Quick Reference Guide

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General Information

Turning the Calculator On and Off

AC/ON **(All Clear/On)**—Turns on the calculator.

This key also clears the display, all pending operations, and values in memory or the mode registers.

The calculator turns off automatically when the solar cell panel is no longer exposed to light.

Modes

The calculator can operate in three different modes. Setting the calculator to a particular mode prepares it to perform special functions. The available modes are statistics, financial, and profit margin.

Indicators in the display tell you the calculator's current mode. STAT displays for statistics, FIN for financial. No indicator is displayed for profit margin mode.

MODE—Changes the calculator to the next mode in sequence. To set the calculator to a particular mode, press MODE repeatedly until the appropriate indicator is displayed.

Changing to a new mode clears the contents of the mode registers.

You can do arithmetic, mathematical, and percentage operations in any mode.

Second Functions

2nd **(Second Function)**—Enables you to perform the “second” functions that are marked over some of the keys. To perform a second function, press 2nd and then the appropriate function key.

When you press 2nd, **2nd** appears in the display until you press another key.

If you press 2nd and then a key that does not have a second function, the key performs its normal function. If you accidentally press 2nd, press it again to cancel its effect.

Clearing the Calculator

AC/ON **(All Clear/On)**—Clears the calculator completely, including the display, all pending operations, and the memory and mode registers. Pressing AC/ON also sets the calculator to floating-decimal format and financial mode.

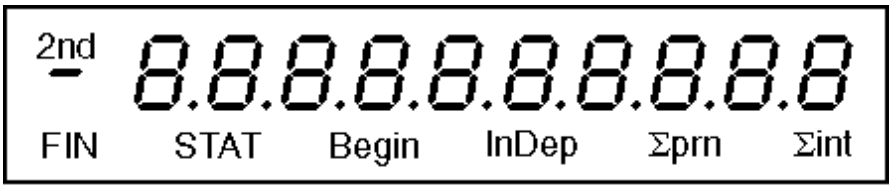
CE/C **(Clear Entry/Clear)**—Clears incorrect entries, error conditions, the display, or pending operations. It does not affect the memory, the mode registers, or the display format.

2nd [CMR] **(Clear Mode Registers)**—Clears any values that have been stored in the mode registers.

Note: Changing to a new mode also clears the contents of the mode registers.

The Display

The display shows a maximum of 10 digits, although the calculator internally retains a maximum of 13 digits.



Display Indicators

Indicator	Meaning
2nd	The calculator will access the second function of the next key pressed (appears when you press 2nd).
FIN	The calculator is in the financial mode.
STAT	The calculator is in the statistics mode.
	Note: No indicator displays when the calculator is in profit margin mode.
Begin	The calculator computes annuities as beginning-of-period payments rather than end-of-period payments. (Displayed only in the financial mode.)

(continued)

Indicator	Meaning
InDep	The displayed result is for the independent variables (x values). (Displayed only in the statistics mode.)
Dep	The displayed result is for the dependent variables (y values). (Displayed only in the statistics mode.)
Σprn	The value in the display is the summed principal over a range of payments. (Displayed only in the financial mode.)
prn	The value in the display is the principal for a single payment. (Displayed only in the financial mode.)
Σint	The value in the display is the summed interest over a range of payments. (Displayed only in the financial mode.)
int	The value in the display is the interest for a single payment. (Displayed only in the financial mode.)

Arithmetic Operations

Entering Numbers

[0] - [9] **(Digits)**—Enter digits into the display. You can enter a maximum of 10 digits and a decimal point.

[·] **(Decimal Point)**—Enters a decimal point.

[+/−] **(Change Sign)**—Changes the sign of the number in the display. To enter a negative number, first enter the number as a positive value and then press [+/−].

Arithmetic Keys

[+], [−], [×], [÷]—Perform the arithmetic operations of addition, subtraction, multiplication, and division.

[=] **(Equals)**—Completes all pending operations and displays the result of a calculation.

Correcting Errors

Correcting Entry Errors

[CE/C] **(Clear Entry/Clear)**—To clear a numerical entry, press [CE/C] once; then enter the correct number. To clear all pending operations and begin the calculation again, press [CE/C] twice.

[x⇄y] **(x Exchange y)**—Exchanges the values of x and y. If you enter x and y in the incorrect order, press [x⇄y] to reverse them. Then complete the calculation.

[→] **(Backspace)**—Removes the last digit or decimal point from the displayed number if you have not yet pressed an operation key ([+], [−], [×], [÷], etc.). This key is useful for correcting entry errors without having to clear the display and start again.

Correcting Immediate Functions

You can often correct an immediate function by performing the “reverse” operation. For example, if you press [2nd] [x^2] by mistake, you can correct the operation by pressing [2nd] [$\sqrt{x}$].

Display Formats

Floating-Decimal Format

The calculator normally displays numbers in "standard" floating-decimal format, in which numbers are displayed in the range –9,999,999,999 to –0.000000001, 0, or 0.000000001 to 9,999,999,999. If the result of a calculation is too large or too small to be displayed in the normal format, it is displayed in scientific notation. This means the result is expressed as a base value (mantissa) times 10 raised to a power (exponent). For example, 5.9 12 means 5.9×10^{12}.

The calculator is always in floating-decimal format when you turn it on. By changing the display format, you can convert a number from one format to another.

2nd [Fix] **(Fixed Decimal)**—Enables you to set the number of decimal places displayed in a result.

- To set the number of decimal places, press 2nd [Fix] and then press the appropriate digit key (0-9).
- To remove the fixed-decimal setting and restore floating-decimal format, press 2nd [Fix] .

If a result has more than the selected number of decimal places, the displayed number is rounded. If a result has fewer than the selected number of decimal places, trailing 0s are added.

Memory Operations

The memory can store any numeric value within the range of the calculator. You can use the calculator's memory to store, sum, and recall a numeric value. You can use the memory in any mode.

STO **(Store)**—Stores the displayed numeric value in the memory, replacing any value previously stored there. When 0 is displayed, you can clear the memory by pressing STO, thereby storing a zero in memory.

SUM **(Sum)**—Adds the displayed numeric value to the contents of the memory.

To add a series of numbers to the memory, use STO to store the first number (thereby replacing any previous value). Then use SUM with the remaining numbers. Use RCL 2nd [MEM] to display the total.

To subtract the displayed value from the value in memory, press +/– (to change the sign of the displayed value) and then press SUM. Use RCL 2nd [MEM] to display the total.

RCL 2nd [MEM] **(Recall Memory)**—Displays (recalls) the number stored in memory, without affecting the contents of the memory.

Math Operations

2nd [1/x] **(Reciprocal)**—Calculates the reciprocal of the displayed number, which is the same as one divided by the number.

2nd [x²] **(Square)**—Raises the displayed number to the second power, which is the same as multiplying the number by itself. The number can be any value whose square is in the range of the calculator.

2nd [√x] **(Square Root)**—Calculates the square root of the displayed number. The displayed number must be positive or zero; otherwise, an error condition occurs. The result is always positive.

2nd [y^x] **(Universal Power)**—Raises any positive number to any power within the range of the calculator or calculates any root of any positive number within the range of the calculator.

To calculate a power:

1. Enter the number (y) that you want to raise to a power.
2. Press 2nd [y^x].
3. Enter the power (x).
4. Press = or any key that completes the operation.

To calculate a root:

1. Enter the number (y) whose root you want to find.
2. Press [2nd] [y^x].
3. Enter the root (x).
4. Press [2nd] [1/x].
5. Press [=] or any key that completes the operation.

[2nd] [lnx] **(Natural Logarithm)**—Calculates the natural logarithm (base e = 2.718281828459) of the displayed number. The number must be positive; otherwise, an error condition occurs.

[2nd] [e^x] **(Natural Antilogarithm)**— Calculates the natural antilogarithm of the displayed number. This is equivalent to the value of e raised to the power of the number in the display.

Percentage Calculations

[%] **(Percent)**—Calculate percentages, add-ons, discounts, and percentage ratios.

Operation	Key Sequence	Function
Percentage	[×] n [%] [=]	Calculates n% of the principal amount.
Add-On	[+] n [%] [=]	Calculates n% of the principal amount and adds the result to the principal.
Discount	[−] n [%] [=]	Calculates n% of the principal amount and subtracts the result from the principal.
Percentage Ratio	[÷] n [%] [=]	Divides the principal amount by n%.

Percentage Change Calculations

[2nd] [⊿%] **(Percent Change)**—Calculates the percentage change between two values. To calculate the percentage change:

1. Enter the new value.
2. Press [2nd] [⊿%].
3. Enter the old value.
4. Press [=].

The percentage change is calculated by the formula:

$$\frac{\text{New value} - \text{Old value}}{\text{Old value}} \times 100$$

If the result is positive, there is a percentage increase. If the result is negative, there is a percentage decrease.

Margin and Markup Calculations

To calculate cost, selling price, gross profit margin, or markup, use [MODE] to set the calculator to the profit-margin mode (no display indicator).

[CST] **(Cost)**—Enters the cost.

[SEL] **(Selling Price)**—Enters the selling price.

[MAR] **(Margin)**—Enters the gross profit margin, which is the difference between selling price and cost expressed as a percentage of the **selling price**.

[2nd] [MU] **(Markup)**—Enters the markup, which is the difference between selling price and cost expressed as a percentage of the **cost**.

If the percentage is positive, the selling price is greater than the cost. If the percentage is negative, the selling price is less than the cost.

[CPT] **(Computation Key)**—Computes the unknown value for gross profit margin problems and markup problems.

Recalling Values

To recall a value that you have entered or computed, press [RCL] and the appropriate key for the value you want to recall. For example, to recall the value for margin, press [RCL] [MAR].

Performing Gross Profit Margin Calculations

To calculate cost, selling price, or gross profit margin:

1. Press [2nd] [CMR] to clear the registers and use [MODE] to enter the profit margin mode (no display indicator).
2. Enter the two known values (CST, SEL, or MAR).
3. Press [CPT] and the key for the unknown value.

Performing Markup Calculations

To calculate cost, selling price, or markup:

1. Press [2nd] [CMR] to clear the registers and use [MODE] to enter the profit margin mode (no display indicator).
2. Enter the two known values (CST, SEL, or MU).
3. Press [CPT] and the key (or key sequence) for the unknown value.

Compound Interest Calculations

To calculate compound interest, use [MODE] to set the calculator to the to the financial mode (**FIN** appears in the display).

In compound interest calculations in which no payment is involved, the payment (PMT) is assumed to be zero. When the payment has a value other than zero, the calculator treats the problem as an annuity (a series of regular, equal payments).

Compound Interest Keys

In compound interest calculations, the following keys are used to enter or calculate the values listed below.

[N]—Total number of compounding periods.

[%i]—Percent interest per compounding period.

[PV]—Present value of a future amount. With a savings account, for example, PV represents what your money is worth today.

[FV]—Future value of a present amount. With a savings account, for example, FV represents what your money will be worth in the future.

[CPT] **(Computation Key)**—Computes the unknown value for compound interest problems.

Recalling Values

To recall a value that you have entered or computed, press [RCL] and the appropriate key for the value you want to recall. For example, to recall the present value, press [RCL] [PV].

Performing Compound Interest Calculations

To perform a compound interest calculation, you must know any three of the four values (N, %i, PV, or FV). Follow these steps to find the unknown value:

1. Press [2nd] [CMR] to clear the registers and use [MODE] to enter the financial mode (**FIN** appears in the display).

2. Enter the three known values (N, %i, PV, or FV).

3. Press [CPT] and the key for the unknown value.

For compound interest calculations, the payment (PMT) must be zero. This value is set automatically when you press [MODE] to enter the financial mode or when you clear the financial registers.

Annuity Calculations

For annuity calculations, use [MODE] to set the calculator to financial mode (**FIN** appears in the display).

An annuity is a series of equal payments made at regular time periods with interest calculated at the end of each period. Ordinary annuities have end-of-period payments; annuities due have beginning-of-period payments.

[2nd] [BGN] **(Beginning-of-Period)**—Sets the calculator to compute for annuity-due problems (beginning-of-period payments).

Pressing [2nd] [BGN] causes **Begin** to appear in the display. The beginning-of-period function is in effect until you cancel it (by pressing [2nd] [BGN] again) or leave the financial mode.

- When **Begin** is in the display, the calculator solves using beginning-of-period payments.
- When **Begin** is not in the display, the calculator solves using end-of-period payments.

Note: If an annuity problem does **not** use beginning-of-period payments, be sure that **Begin** is not in the display before you compute the answer. Having **Begin** in the display has no effect on compound interest calculations in which no payment is involved.

Annuity Keys

In annuity calculations, the following keys are used to enter or calculate the values listed below.

[N]—Total number of payment periods.

[%i]—Percent interest per payment period.

[PV]—Present value of a series of payments plus the present value of FV. With a savings account, PV represents an initial deposit (not including the first payment). With a loan, PV represents the loan amount.

[PMT]—Amount of the regular payment. This value may be positive or negative, depending on the type of problem you are solving (as explained on page 20).

[FV]—Future value of a series of payments plus the future value of PV. With a savings account, FV represents the final amount withdrawn. With a loan, FV represents any balloon payment that must be made in addition to the last regular payment.

[CPT] (**Computation Key)**—Computes the unknown value for annuity problems.

- When **Begin** is not displayed, the [CPT] key computes the unknown value for ordinary annuities (annuities with end-of-period payments).
- When **Begin** is displayed, the [CPT] key computes the unknown value for annuities due (annuities with beginning-of-period payments).

Recalling Values

To recall a value that you have entered or computed, press [RCL] and the appropriate key for the value you want to recall. For example, to recall the present value, press [RCL] [PV].

Positive or Negative Payments

In annuity problems, the present value and future value are usually positive numbers. The payment amount may be positive or negative, depending on the type of problem you are solving.

- If payments are discounted backward, the payment amount is positive. This is the case in mortgage, loan, bond, and lease problems.

  These problems have a present value, but they may or may not have a future value. (If there is no future value, FV=0.)

- If payments are compounded forward, the payment amount is negative. This is the case in savings problems.

  These problems have a future value, but they may or may not have a present value. (If there is no present value, PV=0.)

Performing Annuity Calculations

To perform an annuity calculation, you must know any four of the five values (N, % i, PV, PMT, or FV). Follow these steps to find the unknown value:

1. Press [2nd] [CMR] to clear the registers, and use [MODE] to enter the financial mode (**FIN** appears in the display).

2. Ensure that the calculator is set correctly for the type of annuity calculation desired.

   - For ordinary annuities, **Begin** should not be displayed.

   - For annuities due, **Begin** should be displayed.

   Press [2nd] [BGN] to turn **Begin** on or off.

3. Enter the four known values (N, % i, PV, PMT, or FV).

4. Press [CPT] and the key for the unknown value.

Note: Generally, solving for the interest rate requires more time than other calculations. If you use unrealistic values, the calculator may take several minutes before indicating an error condition. If this occurs, press [AC/ON] to clear the calculation.

Special Functions for Monthly Compounding or Payment Periods

2nd [÷12] **(Monthly Interest)**—Divides the number in the display by 12 and displays the result. This number can then be stored as the monthly interest rate (%i). To use the 2nd [÷12] key sequence:

1. Enter the annual interest rate for a compound interest or annuity problem.
2. Press 2nd [÷12].

Then press %i to store the result.

The two steps above have the same effect as entering the number of years and then pressing ÷ 12 =.

2nd [×12] **(Number of Monthly Payments)**—Multiplies the number in the display by 12 and displays the result. This number can then be stored as the number of compounding periods or payment periods (N). To use the 2nd [×12] key sequence:

1. Enter the number of years for a compound interest or annuity problem with monthly compounding or payment periods.
2. Press 2nd [×12].

Then press N to store the result.

The two steps above have the same effect as entering the number of years and then pressing × 12 =.

Converting to EFF or APR

To convert to EFF or APR, use [MODE] to set the calculator to the financial mode (**FIN** appears in the display.)

Annual Percentage Rate (APR)—The interest rate per compounding period multiplied by the number of compounding periods per year.

Annual Effective Rate (EFF)—The interest rate compounded yearly that achieves the same future value as the APR. The EFF is the rate at which you actually earn for the period of time stated.

[2nd] [▸EFF] **(APR to EFF)**—Converts annual percentage rates to annual effective rates.

1. Enter the APR.
2. Press [2nd] [▸EFF].
3. Enter the number of compounding periods per year (c/yr) for the APR.
4. Press [=] to calculate the EFF.

[2nd] [▸APR] **(EFF to APR)**—Converts annual effective rates to annual percentage rates.

1. Enter the EFF.
2. Press [2nd] [▸APR].
3. Enter the number of compounding periods per year (c/yr) for the APR.
4. Press [=] to calculate the APR.

Balance, Interest, and Principal

To calculate balance, interest and principal, use [MODE] to set the calculator to the financial mode (**FIN** appears in the display.)

[BAL] **(Balance)**—Calculates the remaining loan balance (principal) after a selected payment.

To find the balance:

1. If necessary, press [2nd] [BGN] to change the calculator to solve for end-of-period payments or beginning-of-period payments.
2. Enter the appropriate values with the [N], [%i], [PV], [FV], and [PMT] keys.
3. Enter the payment number.
4. Press [BAL].

[I/P] **(Interest and Principal**)—Calculates the interest and principal portions of a **single** payment; when used with the [P1/P2] key, it calculates the accumulated interest and principal over a **range** of payments.

[P1/P2] **(Payment Range Entry Key)**—Enters a selected range of payments (payment 1 through payment x) so that you can calculate the accumulated interest and principal over that range.

Note: When using [P1/P2], enter the payment number as an integer. **Do not enter a decimal point.**

Calculating a Single Payment

To find the interest and principal of a single payment:

1. If necessary, press [2nd] [BGN] to change the calculator to solve for end-of-period payments or beginning-of-period payments.
2. Enter the appropriate values with the [N], [%i], [PV], [FV], and [PMT] keys.
3. Enter the payment number.
4. Press [I/P] to calculate the interest. (The **int** indicator is displayed with the result.)
5. Press [x⇆y] to display the principal. (The **prn** indicator is displayed with the result.)

If you want to display the interest portion again, press [x⇆y]. Pressing [x⇆y] alternately displays the interest and principal.

Calculating a Range of Payments

To find the summed interest and principal over a range of payments:

1. If necessary, press [2nd] [BGN] to change the calculator to solve for end-of-period payments or beginning-of-period payments.
2. Enter the appropriate values with the [N], [%i], [PV], [FV], and [PMT] keys.
3. Enter the first payment number (P1) and press [P1/P2].
4. Enter the second payment number.
5. Press [I/P] to calculate the interest.

   (The Σ**int** indicator is displayed with the result.)
6. Press [x⇆y] to display the principal.

   (The Σ**prn** indicator is displayed with the result.)

If you want to display the interest portion again, press [x⇆y]. Pressing [x⇆y] alternately displays the interest and principal.

Statistics

To enter a statistics problem, use [MODE] to set the calculator to the statistics mode (**STAT** appears in the display).

[2nd] [CMR] **(Clear Mode Registers**)—Clears any previously entered data points.

[Σ+] **(Statistics Data Entry)**—Enters the displayed number as a data value in the statistical registers. Each time you press [Σ+], the display shows the number of data values currently stored in the statistical registers.

[2nd] [Σ–] **(Statistics Data Removal**)—Removes a data value from the statistical registers. Each time you press [2nd] [Σ–], the display shows the number of data values currently stored in the statistical registers.

Entering Two-Variable Data Values

Use [x⇆y] in conjunction with [Σ+] to enter data points with both x and y values as follows:

1. Enter an x value and press [x⇆y].
2. Enter a y value and press [Σ+].

Repeat the procedure to enter additional data points. You can also follow this procedure with [2nd] [Σ–] to remove data points.

Mean

2nd [Mean] **(Data Mean)**—Calculates the mean (average) of all the data values currently stored in the statistical registers.

If you have entered data points with x and y values, press 2nd [Mean] to display the mean of the y values; then press x⇆y to display the mean of the x values.

Standard Deviation

The 2nd [σn] and 2nd [σn-1] key sequences calculate the standard deviation of the data values in the statistical registers.

If you entered data points with x and y values, press 2nd [σn] or 2nd [σn-1] to display the standard deviation of the y values; then press x⇆y to display the standard deviation of the x values.

2nd [σn] **(“Population” Deviation)**—Calculates the “n weighted” (or “population”) standard deviation.

2nd [σn-1] **(“Sample” Deviation)**—Calculates the “n - 1 weighted” (or “sample”) standard deviation.

Linear Regression

2nd [b/a] **(Intercept/Slope)**—Enables you to display the y-intercept and slope of the representative line. To display the y-intercept (b), press 2nd [b/a]; to display the slope (a), press x⇆y after you display the y-intercept.

2nd [Corr] **(Correlation)**—Calculates the correlation between the x and y values in a set of data points.

2nd [x′], 2nd [y′] **(Predicted Value**)—After you enter an x value, you can press 2nd [y′] to display the y value that corresponds with that x on the best straight line through the data points entered. Similarly, after you enter a y value, you can press 2nd [x′] to display the corresponding x value.

Common Keystroke Sequences

Monthly Payment for a Home Mortgage

Purpose: To find the amount of the monthly payment on a mortgage with end-of-month payments (ordinary annuity).

Values You Supply:

- **mortgage** amount
- annual interest **rate**
- number of **years** in mortgage

Procedure	Key Sequence
Clear calculator and mode registers; select two decimal places.	[CE/C] [CE/C] [2nd] [CMR] [2nd] [Fix] 2
Press [MODE] until **FIN** is displayed.	[MODE]
Press [2nd] [BGN] until **Begin** is **not** displayed.*	[2nd] [BGN]
Enter mortgage amount.	**mortgage** [PV]
Calculate interest rate.	**rate** [2nd] [÷12]
Enter interest rate.	[%i]
Calculate number of payment periods.	**years** [2nd] [×12]
Enter number of payment periods.	[N]
Compute monthly payment.	[CPT] [PMT]

* If payments occur at the beginning of each month (annuity due), press [2nd] [BGN] until **Begin** is displayed.

Remaining Balance for a Home Mortgage

Purpose: To find the remaining balance—after a selected payment number—of a mortgage with end-of-month payments (ordinary annuity).

Values You Supply:

- **mortgage** amount
- annual interest **rate**
- number of **years** in mortgage
- amount of **payment**
- payment **number**

Procedure	Key Sequence
Clear calculator and mode registers; select two decimal places.	CE/C CE/C 2nd [CMR] 2nd [Fix] **2**
Press MODE until **FIN** is displayed.	MODE
Press 2nd [BGN] until **Begin** is **not** displayed.*	2nd [BGN]
Enter mortgage amount.	**mortgage** PV
Calculate interest rate.	**rate** 2nd [÷12]
Enter interest rate.	%i
Calculate number of payment periods.	**years** 2nd [×12]
Enter number of payment periods.	N
Enter payment amount.	**payment** PMT
Enter payment number and calculate balance.*	**number** BAL

* If payments occur at the beginning of each month (annuity due), press 2nd [BGN] until **Begin** is displayed.

Loan Amount a Buyer Can Afford

Purpose: To find the maximum loan amount and selling price a prospective home buyer can afford, assuming that:

- The buyer will pay a given percentage of the selling price as a down payment.
- An estimated percentage is added to the monthly payment for taxes and insurance.
- The total monthly payment (principal, interest, taxes, and insurance) is not to exceed a predetermined percentage limit of the buyer's gross monthly income.

Values You Supply:

- annual interest **rate**
- number of **years** in mortgage
- buyer's gross monthly **income**
- **percent limit** (of gross monthly income)
- **percent taxes and Insurance** (of total monthly payment)
- **percent down** (of selling price)

Procedure	Key Sequence
Clear calculator and mode registers; select two decimal places.	CE/C CE/C 2nd [CMR] 2nd [Fix] **2**
Press MODE until **FIN** is displayed.	MODE

(continued)

Procedure	Key Sequence
Press [2nd] [BGN] until **Begin** is **not** displayed.*	[2nd] [BGN]
Enter monthly interest rate.	**rate** [2nd] [÷12] [%i]
Calculate and enter number of monthly payments.	**years** [2nd] [×12] [N]
Calculate and store maximum monthly payment.	**income** [×] **percent limit** [%] [=] [STO]
Calculate and enter maximum allowable loan payment (without taxes or insurance).	**1** [+] **percent taxes and insurance** [%] [=] [2nd] [1/x] [×] [RCL] [2nd] [MEM] [=] [PMT]
Compute maximum allowable loan amount.	[CPT] **PV**
Calculate house price (including down payment).	**1** [−] **percent down** [%] [=] [2nd] [1/x] [×] [RCL] [PV] [=]
Calculate down payment.	[−] [RCL] [PV] [=]

Selling Price of a House if Seller Pays Points and Commission

Purpose: To find the selling price of a house, assuming that the seller wants to make a certain profit and that the selling price must include points and commission.

Values You Supply:

- **original price** (dollar amount)
- **profit** (dollar amount)
- **points** (percentage points)
- **commission** (percentage points)

Procedure	Key Sequence
Clear calculator and mode registers; select two decimal places.	[CE/C] [CE/C] [2nd] [CMR] [2nd] [Fix] **2**
Press [MODE] until no mode indicator is displayed.	[MODE]
Add original price and profit to calculate cost before points are added on, and enter.	**original price** [+] **profit** [=] [CST]
Enter points as a margin.	**points** [+] **commission** [=] [MAR]
Compute selling price.	[CPT] [SEL]

Error Conditions

When an error condition occurs, the word "Error" appears in the display. The calculator will not accept a keyboard entry until you press [CE/C] or [AC/ON] to clear the error condition. (Press [CE/C] twice to clear the condition and all pending operations; press [AC/ON] to clear the calculator completely.)

General Error Conditions

The error conditions listed below can occur in any mode. Errors occur when you:

- Calculate a result that is outside the range -9.999999×10^{99} to -1×10^{-99}, zero, or 1×10^{-99} to 9.999999×10^{99}.
- Divide a number by zero.
- Calculate [2nd] [lnx] or [2nd] [1/x] of zero.
- Calculate [2nd] [Δ%] for an old value equal to zero.
- Calculate [2nd] [$\sqrt{x}$], [2nd] [lnx], or [2nd] [y^x] of a negative number.
- Use [2nd] [y^x] to raise zero to the power of zero.
- Press a key or key sequence that cannot be performed in the current mode.

Financial Error Conditions

In the financial mode, errors occur when you:

- Calculate a financial unknown before you have entered enough known variables or when no solution exists.

Financial Error Conditions (Continued)

- Use [2nd] [▸APR] or [2nd] [▸EFF] when the number of compounding periods per year is zero or very large, or when %i is small.
- Compute the balance or interest for a payment number less than zero.

Statistics Error Conditions

In the statistics mode, errors occur when you:

- Use [Σ+] to enter a data point (x or y) such that $|x| > 1 \times 10^{50}$.
- Press [2nd] [Σ−] when there are less than two data points in the statistical registers.
- Calculate [2nd] [σ_{n-1}] with only one data point.
- Perform a statistical calculation when there are no data points.
- Perform a linear regression calculation with less than two data points.
- Perform a linear regression calculation on a vertical line.
- Enter a series of data values such that the sum of their squares exceeds the upper or lower limit of the calculator.

In Case of Difficulty

If you have difficulty operating the calculator, you may be able to correct the problem with the solutions suggested in the table below.

Observation	Action
Display is blank; digits do not appear.	The display goes blank during a long calculation. Wait for it to finish. Be sure the solar power cells are exposed to an adequate light source.
A function does not seem to work.	Be sure the calculator is set for the correct mode—profit margin, FIN, or STAT.
The number of decimal digits that you expect is not displayed.	Be sure the display is set to the correct format—floating decimal or fixed decimal.
An error occurs.	Check the error conditions listed on pages 35-36.

If you experience difficulties other than those listed above, press AC/ON to clear the calculator, and then repeat your calculation.

Review the operating instructions to be sure that you are performing the calculation correctly.

TI Product Service and Warranty Information

TI Product and Services Information

For more information about TI products and services, contact TI by e-mail or visit the TI calculator home page on the world-wide web.

e-mail address: **ti-cares@ti.com**

internet address: **http://www.ti.com/calc**

Service and Warranty Information

For information about the length and terms of the warranty or about product service, refer to the warranty statement enclosed with this product or contact your local Texas Instruments retailer/distributor.