



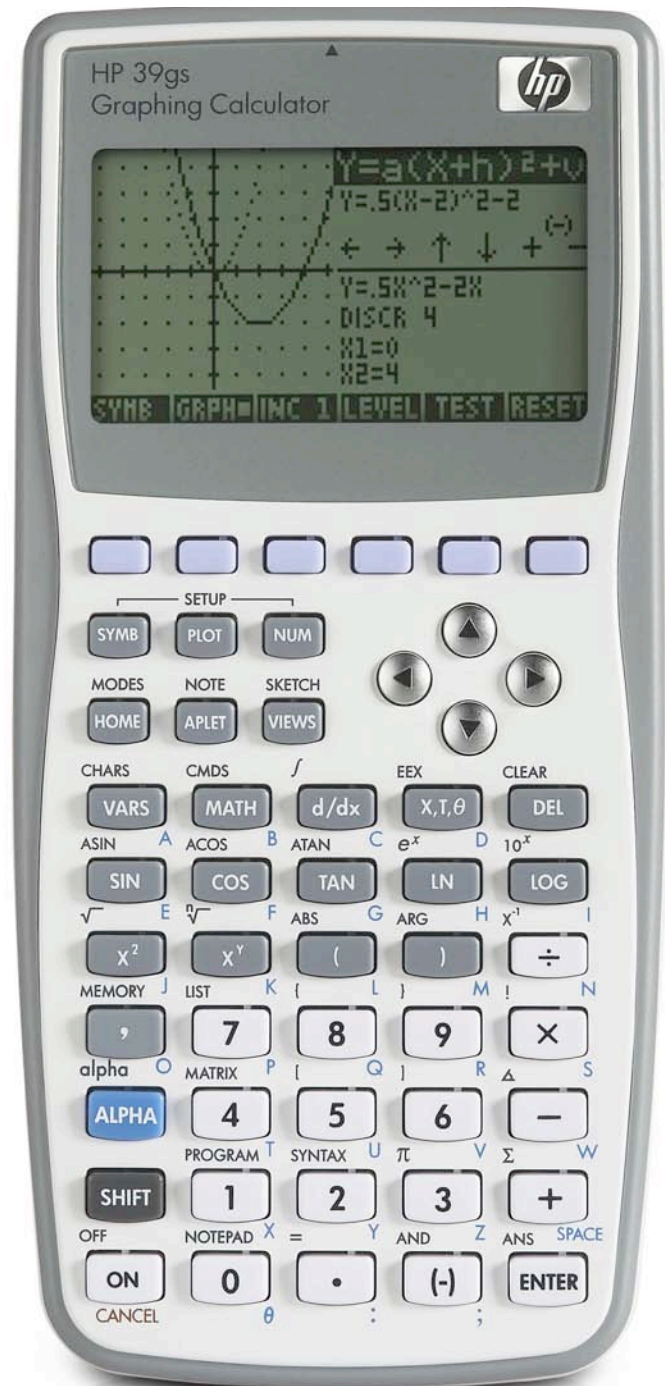
hp calculators

HP 39gs Property Appreciation

The FINANCE aplet

Property Appreciation

Practice solving property appreciation problems



The FINANCE aplet

The HP 39gs has a financial solver aplet built into the calculator. To access this aplet, press $\boxed{\text{APLET}}$. Scroll down the list using the \odot key until "Finance" is highlighted in the display as shown below.



Figure 1

Press $\boxed{\text{START}}$ to begin the aplet. A data entry form is then displayed that is used to solve a number of financial math problems.

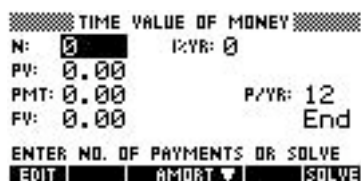


Figure 2

To solve problems using this display, move the cursor using the \leftarrow \uparrow \downarrow \rightarrow keys to each field and input its value, if known. To solve for the unknown value, move the cursor to the field for which you wish to solve, and press menu key labeled $\boxed{\text{MENU}}$. The value of the unknown will be calculated and displayed in the field. Note: If you enter the aplet and values are already present in some of the fields, you can clear these values to their default state by pressing the $\boxed{\text{SHIFT}}$ key and then $\boxed{\text{DEL}}$, to access the $\boxed{\text{CLEAR}}$ function written above it.

Several values are already present on this screen. The number of payments per year is set to 12 for monthly compounding, as shown to the right of the P/YR: in the screen above. If annual compounding is desired, this value should be changed to 1. If quarterly compounding is desired, this value should be changed to 4. Just below the P/YR: field, the calculator displays the word END, signifying that payments are assumed to occur at the end of each period, which would be the case for ordinary annuities. If payments are desired at the beginning of the period, as would be the case in an annuity due, this value can be changed by moving the cursor to this field. When the cursor is on this field, $\boxed{\text{CHOOSE}}$ is displayed above the second menu key, indicating the calculator will supply a list of choices (Begin or End) in a small CHOOSE box if this key is pressed. Note that Begin will be displayed as Beg if chosen. To exit from this data entry screen, press a key that starts another function.



Figure 3

The HP 39gs Financial solver follows the standard convention that money in is considered positive and money out is negative.

Property Appreciation

When the value of a piece of property increases over time, it has appreciated in value. If a value in the past is known, it is possible to solve the resulting compound interest problem to determine the rate of this appreciation.

Practice solving property appreciation problems

Example 1: Greg bought a house 10 years ago for \$120,000. He sold it last week for \$180,000. On an annual basis, what was the compound rate of increase or appreciation?

HP 39gs Property appreciation

TIME VALUE OF MONEY		
N:	10	P/YR: 4.137...
PV:	120,000.00	
PMT:	0.00	P/YR: 1
FV:	-180,000.00	End
ENTER YEARLY INT RATE OR SOLVE		
EDIT	AMORT ▼	SOLVE

TIME VALUE OF MONEY		
N: 60	P/YR: 5.108%	
PV: 310,000.00		
PMT: 0.00	P/YR: 12	
FV: -400,000.00	End	
ENTER YEARLY INT RATE OR SOLVE		
EDIT	AMORT ▼	SOLVE

TIME VALUE OF MONEY

N: 8 P/YR: 7.245...

PV: -800,000.00

PMT: 0.00 P/YR: 1

FV: 1,400,000.00 End

ENTER YEARLY INT RATE OR SOLVE

EDIT AMORT ▼ SOLVE

HP 39gs Property appreciation