

# HP 17bII+ Calculator Guide

PIIARS OF  
WALL STREET

Training the Financial Leaders of Tomorrow

# About Us

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- Pillars of Wall Street provides real-world financial training for new and seasoned professionals, as well as university students
- Founded by experienced financial instructors who are also former investment bankers, we offer in-house financial training for corporate clients, university seminars for undergraduates and MBAs as well as public courses for smaller groups and individuals
- We use our experiences on Wall Street to emphasize practical applications, applying the same level of dedication in the classroom as that required to execute deals
- We ensure you are desk-ready through our live instruction and interactive, learning by doing approach
- You are the pillars of your organization's success, and we teach you the pillars that will serve as the cornerstones of your financial career: financial accounting, financial modeling and Excel, corporate valuation, transaction structuring, credit analysis and capital markets

# Topics

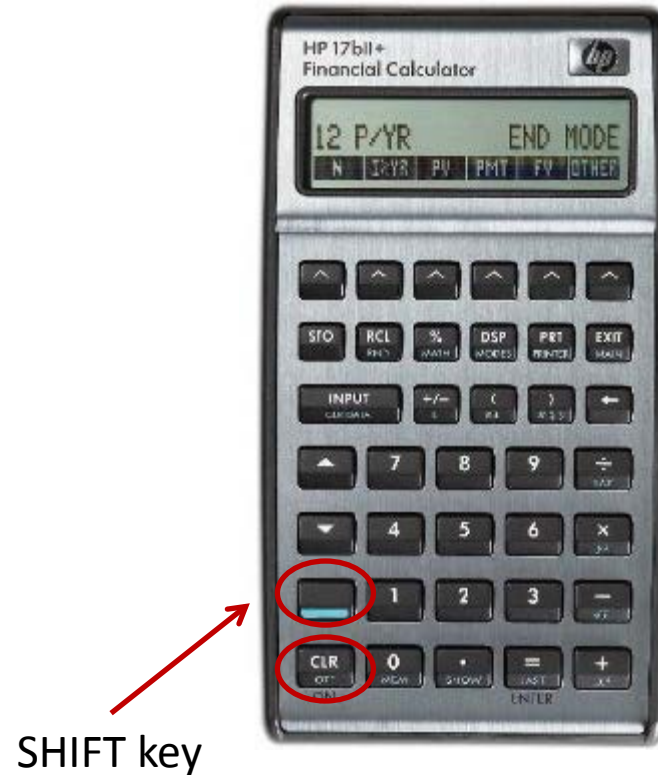
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- Turning calculator on and off
- Clearing data
- Setting decimal places
- Entering calculations
- Storing data in memory
- Time value of money
- Net present value
- Internal rate of return

# Turning Calculator On and Off

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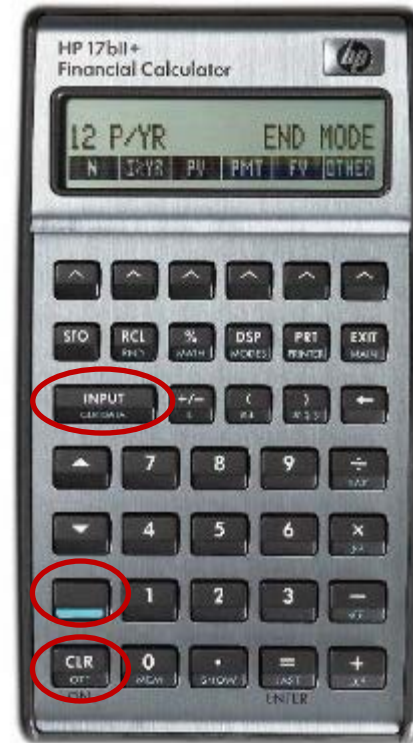
- To turn calculator on
  - 1) Press CLR key
- To turn calculator off
  - 1) Press SHIFT key
  - 2) Press OFF key



# Clearing Data

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- Clearing all calculations in progress and current display
  - 1) Press CLR key
- Clearing data stored in memory (for example, to clear all variables when working in the time value of money environment)
  - 1) Press SHIFT key
  - 2) Press CLR DATA key

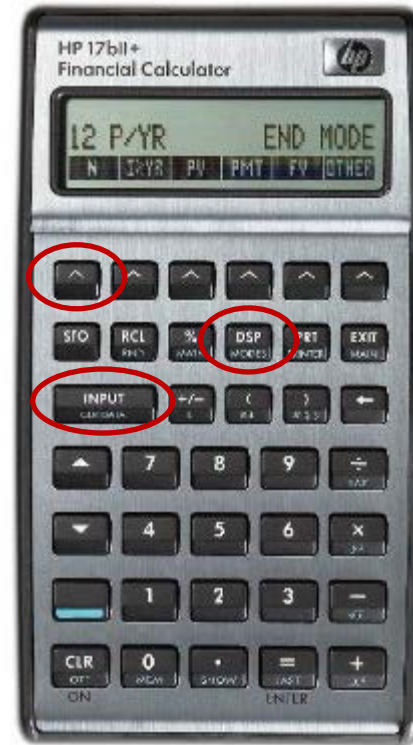


**\* ALWAYS USE SHIFT – CLR DATA TO CLEAR ALL DATA STORED PRIOR TO BEGINNING A NEW CALCULATION**

# Setting Decimal Places

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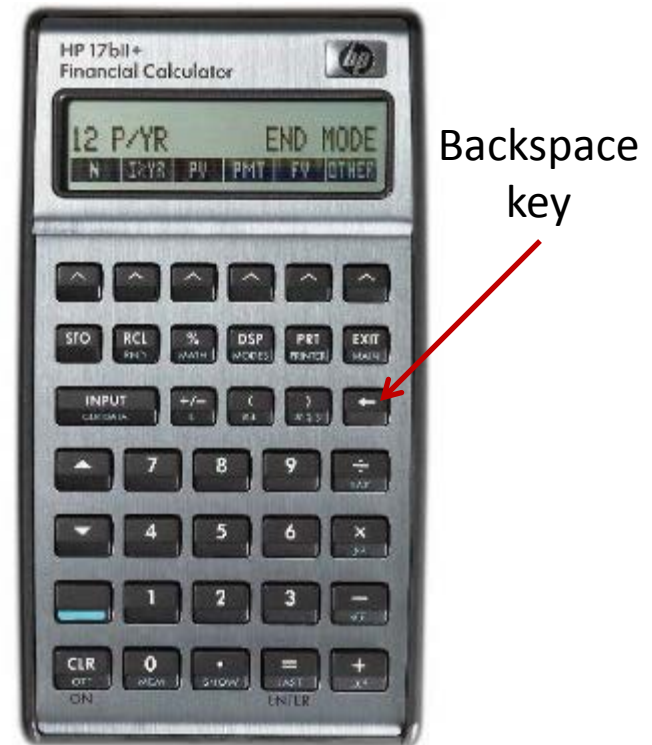
- 1) Press DSP key
- 2) Select FIX by pressing  $\wedge$  key in upper left
- 3) Enter the number of decimals you would like (we recommend “4”)
- 4) Press INPUT key



# Entering Calculations

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- Press digits to start calculation
- Press operator (+, −, ×, ÷, etc.) to continue calculation
- Press backspace key to erase digits
- Press CLR to clear display



# Storing Data in Memory

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- There are 10 storage registers (0-9)
- To store a figure, press STO, and then the register number
- To recall that figure, press RCL and the same register number you entered in the prior step
- By repeating the storage process for any given register number, you overwrite the value in the existing register





# Time Value of Money

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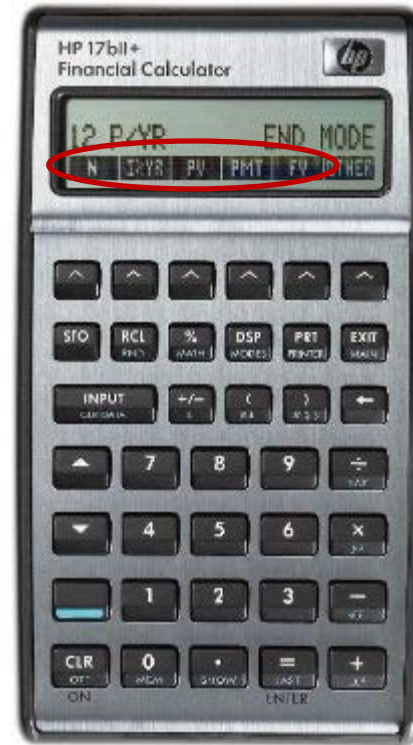
- To access TVM menu, select FIN by pressing  $\wedge$  key in upper left
- Time value of money problems involve 5 variables
- If you know 4 of the 5 variables you can solve for the remaining one



# Time Value of Money

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- 5 TVM variables
  - Time (N)
  - Rate (I%YR)
  - Present value (PV)
  - Payment (PMT)
  - Future value (FV)
- As you enter data, please keep in mind that the PV and FV will be opposite signs since one represents a cash inflow and the other is a cash outflow



# Settings for Time Value of Money

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- 1) Select FIN
- 2) Select TVM
- 3) Select OTHER
- 4) Set P/YR to 1 (sets number of payments per year to 1)
  - a) Press 1
  - b) Select P/YR
- 5) Set mode to END (payments take place at the end of the year)
  - a) Select END



# Exercise 1 – PV

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- Problem
  - Five years from now you will receive a royalty check of \$100. Assuming a 10.0% annual discount rate, what is the present value of your royalty payment?
- Solution
  - 1) Select FIN
  - 2) Select TVM
  - 3) Press SHIFT – CLR DATA
  - 4) Press 100, FV
  - 5) Press 5, N
  - 6) Press 10, I%YR
  - 7) Press PV
    - Result is -62.0921

**\* PLEASE NOTE THAT OMITTING THE “PMT” VARIABLE RESULTS IN A DEFAULT VALUE OF 0 FOR THAT VARIABLE**

# Exercise 2 – FV

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- Problem
  - Find the future value in 8 years of \$250 at a 7.0% annual return
- Solution
  - 1) Select FIN
  - 2) Select TVM
  - 3) Press SHIFT – CLR DATA
  - 4) Press 250, PV
  - 5) Press 8, N
  - 6) Press 7, I%YR
  - 7) Press FV
    - Result is -429.5465

**\* PLEASE NOTE THAT OMITTING THE “PMT” VARIABLE RESULTS IN A DEFAULT VALUE OF 0 FOR THAT VARIABLE**

# Exercise 3 – PMT

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- Problem

- If you are saving for retirement in 40 years, your goal is to accumulate \$5 million, your current retirement balance is \$100,000, and you expect to earn an annual return of 8.0% in line with the long term market average, how much would you have to invest every year in order to achieve your goal?

- Solution

- 1) Select FIN
- 2) Select TVM
- 3) Press SHIFT – CLR DATA
- 4) Press 5,000,000, FV (positive value since this is a cash inflow)
- 5) Press 100,000, +/-, PV (negative value since this is a cash outflow)
- 6) Press 40, N
- 7) Press 8, I%YR
- 8) Press PMT
  - Result is -10,914.7914 (negative value since this is a cash outflow)

# Exercise 4 – N

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- Problem
  - You currently have \$10,000 to invest and can invest an additional \$5,000 every year. You expect an annual return of 8.5%. How many years will it take for this sum to grow to \$75,000?
- Solution
  - 1) Select FIN
  - 2) Select TVM
  - 3) Press SHIFT – CLR DATA
  - 4) Press 10,000, PV (positive value since this is a cash inflow)
  - 5) Press 75,000, +/-, FV (negative value since this is a cash outflow)
  - 6) Press 5,000, PMT (positive value since this is a cash inflow)
  - 7) Press 8.5, I%YR
  - 8) Press N
    - Result is 8.1512

# Exercise 5 – I%YR

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- Problem
  - At what annual rate would you have to invest \$200,000 in order for that sum to grow to \$1,000,000 in 20 years, assuming no intermediate payments?
- Solution
  - 1) Select FIN
  - 2) Select TVM
  - 3) Press SHIFT – CLR DATA
  - 4) Press 200,000, PV (positive value since this is a cash inflow)
  - 5) Press 1,000,000, +/-, FV (negative value since this is a cash outflow)
  - 6) Press 20, N
  - 7) Press I%YR
    - Result is 8.3798%

**\* PLEASE NOTE THAT OMITTING THE “PMT” VARIABLE RESULTS IN A DEFAULT VALUE OF 0 FOR THAT VARIABLE**



# Net Present Value / Internal Rate of Return

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- The TVM menu can only solve problems where the cash flow in every period is constant
- If cash flows fluctuate over time, use the CFLO menu
  - 1) Select FIN
  - 2) Select CFLO
  - 3) Press SHIFT – CLR DATA
  - 4) Enter each cash flow one by one
    - Keep in mind the first cash flow is today (year 0)
  - 5) You will need to specify how many times each cash flow occurs

# Exercise 6 – PV for DCF

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- Problem
  - Your free cash flow forecast in a DCF for the next 5 years is 100, 125, 140, 150, 155. What is the present value of this stream of cash flows at a WACC of 9.0%?
- Solution
  - 1) Select FIN
  - 2) Select CFLO
  - 3) Press SHIFT – CLR DATA
  - 4) For FLOW(0), press 0, INPUT
  - 5) For FLOW(1), press 100, INPUT, then for #TIMES(1)=1, INPUT
  - 6) For FLOW(2), press 125, INPUT, then for #TIMES(2)=1, INPUT
  - 7) For FLOW(3), press 140, INPUT, then for #TIMES(3)=1, INPUT
  - 8) For FLOW(4), press 150, INPUT, then for #TIMES(4)=1, INPUT
  - 9) For FLOW(5), press 155, INPUT, then for #TIMES(5)=1, INPUT
  - 10) Press EXIT
  - 11) Select CALC menu
  - 12) Press 9, I%
  - 13) Select NPV
    - Result is 512.0620

# Exercise 7 – IRR for LBO

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- Problem

- A private equity firm put in \$100 million in initial equity, received a dividend at the end of year 2 of \$10 million, and exited at an equity value of \$200 million at the end of year 3. What is the IRR?

- Solution

- 1) Select FIN
- 2) Select CFLO
- 3) Press SHIFT – CLR DATA
- 4) For FLOW(0), press 100, +/-, INPUT
- 5) For FLOW(1), press 0, INPUT, then for #TIMES(1)=1, INPUT
- 6) For FLOW(2), press 10, INPUT, then for #TIMES(2)=1, INPUT
- 7) For FLOW(3), press 200, INPUT, then for #TIMES(3)=1, INPUT
- 8) Press EXIT
- 9) Select CALC menu
- 10) Select IRR%
  - Result is 28.6374%

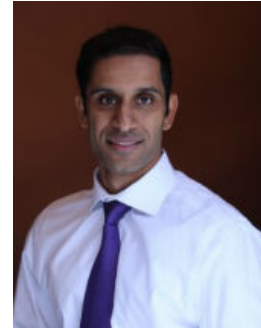
# Leadership

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***Matthew Holaves***  
*Co-Founder*

- Has taught thousands of analysts and associates across US, Europe and Asia
- Formerly, Vice President within the M&A group at Jefferies
- Previously, Associate with Bank of America's TMT investment banking group
- Earlier, Manager with Arthur Andersen's Transaction Advisory Group
- MBA in finance from The Wharton School



***Aalok Mody***  
*Co-Founder*

- Has taught thousands of analysts and associates across US, Europe and Asia
- Formerly, Senior Associate within the M&A group at Jefferies
- Previously, Analyst with Thomas Weisel Partners' TMT investment banking group
- BS in Engineering and Management from Columbia University

**Over a combined two decades of financial training  
and transaction experience**

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