

# HP Graphing Calculator Comparison

Calculator	HP 9g	HP39gs	HP 40gs	HP 48gII	HP50g
<b>Purpose</b>					
	Scientific/graphing calculator for students	Graphing calculator for math and science students (without CAS)	Graphing calculator for math and science students (with CAS)	Graphing calculator for engineering students & professionals	Graphing calculator for math, science and engineering students & professionals
<b>Physical features</b>					
Display type	Pixel	Pixel	Pixel	Pixel	Pixel
CPU		75 Mhz ARM9	75 Mhz ARM9	48 Mhz ARM9	75 Mhz ARM9
Display size	32 x 36 pixels + 2 lines + indicators	131 x 64 pixels	131 x 64 pixels	131 x 64 pixels	131 x 80 pixels
Calculator-to-Calculator Communications		IrDA (wireless)	Cable included	IrDA (wireless)	IrDA (wireless)
Serial port		USB/RS232	USB/RS232	USB/RS232	USB/RS232
Expansion port					SD card slot
Additional applications available on Internet		•	•	•	•
<b>Operating features</b>					
Entry logic	Algebraic	Algebraic	Algebraic	Algebraic/RPN/textbook	Algebraic/RPN/textbook
Menus, prompts	•	•	•	•	•
Alpha messages	•	•	•	•	•
Soft-keys		•	•	•	•
Numeric precision—intermediate/internal	24 digits	15 digits internal/rounded to 12 for display	15 internal/12 display/infinite precision for integers	15 internal/12 display/infinite precision for integers	15 internal/12 display/infinite precision for integers
Numeric precision—displayed	10 digits	12 digits	12 digits	12 digits	12 digits
Numeric precision—displayed exponent	±99	±499	±499	±499	±499
<b>Configuration</b>					
Flash ROM (allows for future electronic software upgrades*)		1 MB	2 MB	2 MB	2 MB
Memory	26 variables + 400 Programming steps + 30 statistical samples	256 KB	256 KB	256 KB	512 KB
Redefinable menu keys				•	•
Redefinable keyboard (user mode)				•	•
Peripherals		•	•	•	•
Supports applets (built-in: triangle solver, linear equation solver, trig/quad explorer, TVM...)		•	•		
Supports libraries/RPL programs				•	•
<b>Vector operations</b>					
Rectangular/polar				•	•
Matrix operations		•	•	Includes symbolic matrices	Includes symbolic matrices
Matrix editor (HP MatrixWriter)		•	•	•	•
<b>Graphing features</b>					
2-D function, polar, parametric plot	2-D functions	•	•	•	•
Sequence; cobweb, staircase plot		•	•	•	
Plot/table screen, box whisker plot		•	•	•	
3-D differential equation, bar plot				•	•
Histogram, scatter plot		•	•	•	•
Find: intersect, extremum, slope, area		•	•	•	•
Zoom, trace, co-ordinates, shade	•	•	•	•	•



\* A PC with an internet connection is required. Please purchase separately. USB cable included. HP makes no representation that a future upgrade will be available.

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<b>Math features</b>					
+ , - , x , ÷ , √ , 1/x , =/÷ , ln , e <sup>x</sup> , √ <sup>y</sup>	•	•	•	•	•
y <sup>x</sup> , LOG , 10 <sup>x</sup> , x <sup>2</sup> , % , π , n!	•	•	•	•	•
% change				•	•
Degrees, radians, or grads mode	•	•	•	•	•
Trigonometric functions/ inverses	•	•	•	•	•
Hyperbolics/inverses	•	•	•	•	•
Finance Functions		TVM	TVM	TVM/amort	TVM/amort
HP Solve application (root finder)		•	•	•	•
Numeric integration		•	•	•	•
Symbolic integration		•	•	•	•
Numeric differentiation		•	•	•	•
Symbolic differentiation		•	•	•	•
Complex number functions		•	•	•	•
Polynomial root finder, Taylor series		•	•	•	•
Absolute value, round	•	•	•	•	•
Integer & fractional part of a number	•	•	•	•	•
Modulo function, floor, ceiling		•	•	•	•
CAS (Computer Algebra System)			•	•	•
<b>Scientific features</b>					
Decimal hrs/hrs min sec conversions	•	•	•	•	•
Polar/rectangular conversions	•	•	•	•	•
Angle conversions		•	•	•	•
Base conversions and arithmetic	•			•	•
Unit conversions	•	•	•	•	•
Bit, Boolean graphics				•	•
Display graphics		•	•	•	•
Built in equation library				•	•
<b>Statistical features</b>					
Σx, Σx <sup>2</sup> , Σy, Σy <sup>2</sup> , Σxy	•	•	•	•	•
Sample standard deviation, mean	•	•	•	•	•
Population standard deviation	•	•	•	•	•
Linear regression	•	•	•	•	•
Combinations, permutations	•	•	•	•	•
Weighed mean	•	•	•	•	•
Edit, save, name, list		•	•	•	•
Curve fit (LIN, LOG, EXP, POW)	•	•	•	•	•
Plot statistical data		•	•	•	•
Hypothesis tests		•	•	•	•
Confidence intervals		•	•	•	•
<b>Other features</b>					
Root finder		HP Solve	HP Solve	HP Solve	HP Solve
Number of steps/regs or bytes	400	256 KB	256 KB	256 KB	1.2 MB
Number of programs/formulae	10	++	++	++	++
Levels of subroutines	++	++	++	++	++
Branching	•	•	•	•	•
Flags				256	256
Alpha prompts in programs	•	•	•	•	•
Input forms, alpha string manipulation	•	•	•	•	•
Indirect addressing				•	•
Index looping	•	•	•	•	•
Alpha listing	•	•	•	•	•
Protection	slide-on cover	slide-on cover	slide-on cover	slide-on cover	premium pouch
Built in fuctions		600+	600+	2,300+	2,300+

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