

Which Graphing Calculator Should I Get?

The first step is to read your instructor's syllabus or handouts for a specific calculator recommendation, or ask your instructor in person.

What choices do I have?

Most math professors at Clark College are familiar with operating the Texas Instruments (TI) graphing calculators and use them when they give calculator demonstrations. In fact, TI products are the only graphing calculators that the Math Department has for classroom presentations. For these reasons, *our graphing calculator recommendations are limited to TI products. If you choose to buy or already own a non-TI calculator, then you cannot count on getting help with them from members of the Math Department.*

Texas Instruments currently makes three series of graphing calculators. The calculators in each series have a similar "look and feel" and similar capabilities.

- **84 Series:** The 83, 83Plus, 84Plus and Silver Editions (SE) of these
- **89 Series:** The 89 (and 89Titanium), 92 Plus, Voyage 200
- **TI-Nspire Series:** Several models carrying the "Nspire" name.

There are also some older models that are no longer being made:

- **86 Series:** The 85 and 86.
- **Earlier Series:** The 81 and 82 are very old and not recommended.

The 84 and 86 series are *graphical* calculators – they do all the things that a less expensive *scientific* calculator does, but they also graph equations (and do many other useful things too). The 89 series can do all the things a graphical calculator can do, but also has *symbolic* capabilities. In other words, it can perform algebraic and calculus operations, such as factoring and differentiating expressions.

What's the difference between the models?

Briefly, here are the key differences: For simplicity we'll discuss refer to all related models together. For example, comments about the 84 series apply to the 83 plus too.

- **86 Series:** This series is no longer being made, so unless you are getting one for free or very inexpensively, we *don't recommend buying the 86. The 85 is obsolete and is not recommended.*
- **84 Series:** The differences between these models are mainly in processing speed (84's are a bit faster than 83's), memory, and the number of add-on

applications they come with. Most instructors at Clark College don't use the add-on applications, so the models are very similar in practice. "Silver Editions" are faster, and, well, silver, but have the same capabilities. An 83+ or better is fine - it's your choice as to whether the speed is worth the additional price. Finally, if you plan to connect to a PC, get the 83 Plus SE or better, as previous ones don't come with the cable you need.

- **89 Series:** The *TI-89 series are harder to learn on than an 84 series model* – they require good technical ability, time investment, and they cost more money. The TI-89 Titanium is the current model. The older TI-89 has similar capabilities, but is not as easy to connect to PCs if you wish to load software. The voyage 200 has the same capabilities, but has a bigger display screens and keyboard which makes viewing and typing easier. However the Voyage 200 is a lot bulkier and more expensive than the TI-89 titanium.
- **Nspire Series:** The Nspire is the newest model. The regular Nspire has similar functionality to the 84. The "Nspire CAS" is more similar to the 89 Titanium (CAS stands for computer algebra system). While the Nspire can be used for math courses, *if you purchase an Nspire you will have to learn it on your own* – they are not widely used in the Math department.

I need a graphical calculator. What should I get?

- *For most students, a TI-84 is a good choice.*
- If you are a *math, science, computer science, or engineering major*, or if you plan to take the entire calculus sequence and beyond, then *a TI-89 Titanium is a good choice.* However, *a TI-84 will is also fine* even for calculus courses. In fact, some instructors limit the use of TI-89's on quizzes and tests because of their algebra capabilities.

The Bottom Line

- The right choice is the one that will help you most in your Math courses, not necessarily the most advanced or most expensive calculator.
- All things being equal, having the same calculator that your instructor is using is advantageous. While another instructor may have a different model in future courses, by then you should have mastered your own calculator.
- If you have an 84, there are instructional videos on the math department web site at: <http://web.clark.edu/math/Calculator/index.htm>