

CALCULATOR USE IN HIGH SCHOOL (GRADES 9-12) MATH COURSES

All mathematics courses at Emmaus High School currently allow the use of calculators on a daily basis. Calculators are used to perform tedious calculations, eliminate computational errors, and solve realistic problems using higher-level math functions. Students are taught how to use calculators effectively, how to confirm results using mental math, and when it is preferable not to use a calculator. There are three basic kinds of calculators on the market:

- Four function (+, -, x, ÷, =)
- Scientific (sin, cos, tan, ln, log, exp, π , $1/x$, nP_r , nC_r , b/c , $a/b/c$)
- Graphing (statistics, matrices, graphing)

Four function calculators are primarily used in elementary school. **Scientific calculators** are satisfactory for students taking Algebra I and II, Geometry, Math Analysis, and Geometry Concepts. **Graphing calculators** are used in many classes occasionally, but Algebra III/Trig, A.P. Statistics and all levels of Calculus involve their regular use.

The math portion of the SAT and the PSSA (PA State Assessment given to 11th graders) allow the use of any calculator except those with the QWERTY keyboard or paper tape so that problem solving rather than computational skills can be emphasized. In both cases, students will need practice in knowing when to use a calculator and when not to use it. The A.P. Calculus and A.P. Statistics courses are designed with graphing calculators being an integral part of the curriculum. The TI-83 or TI-84 is needed for A.P. Statistics and the TI-83, TI-84, or TI-86 is recommended for A.P. Calculus.

Any calculator **except the TI-89 or TI-92** may be used in testing environments. **We expect students to purchase their own calculator** as a needed school supply along with pencils, notebooks and a book bag. Students become more familiar with calculators when they consistently use the same type at school and home. The **TI-83, TI-83 Plus, or TI-84** graphing calculator will serve all students well throughout high school. The cost of most scientific calculators is less than \$20, and most graphing calculators cost less than \$100. Please consider investing this much in your child's education and future.

The math department will issue a calculator (as they do textbooks) to any student who cannot purchase one for financial reasons. Calculators, as well as textbooks, will not be provided for students who forget to bring them to class unless there is a specific calculator need that day!

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