

MORTON EAST HIGH SCHOOL

Math Department

Graphing calculators are an integral part of Pre-Calculus and AP Calculus. You have already learned how to operate a graphing calculator in Pre-Calculus and will continue to use this valuable technology during AP Calculus at Morton East and throughout your math courses in college.

You are required to use a graphing calculator for the AP Calculus exam. If you already have a TI-Nspire or TI-84, you are already prepared.

If you don't have one yet, the Texas Instrument TI-Nspire CX is the suggested graphing calculator. Calculators can be purchased at local stores or online.

Notice: The TI-Nspire CAS (CAS stands for Computer Algebra System) and TI-89 ARE NOT allowed for the ACT, but are allowed for the SAT & AP exam.



Permitted on SAT & AP Exam



Permitted on ACT & AP Exam

Thank You,

AP Calculus AB & BC Teachers

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AP Calculus AB Summer Work 2019-2020

TO: All 2019/2020 AP Calculus AB Students

FROM: AP Calculus AB East Teachers
Mr. Gierut—Room 301, Ms. Kane—Room 351

We are pleased that you have chosen to complete your math sequence by enrolling in AP Calculus AB for next year. To help ensure your success in AP Calculus AB next year, we have created a summer review program. This program contains material that you will complete online and in person.

Calculus AB Summer Work Requirements:

- Participate in a summer work activity day on May 29th from 8am-11am *or* 12pm-3pm at Morton Freshman Center
- Complete Part I online at Khan Academy by June 19th
- Complete Part II online at Khan Academy by July 10th
- Complete Part III online at Khan Academy by August 7th

Summer work grade (see rubric below) will be given based upon successful completion of each part on-time and participation in the activity day.

AP Calculus AB Summer Work Rubric

	5	4	3	2	1	0
Activity Day	Attended Activity Day with a 100% success on activities	Attended Activity Day with a 86-99% success on activities	Attended Activity Day with a 75-85% success on activities	Attended Activity Day with a 61-74% success on activities	Attended Activity Day with a 50-60% success on activities	Did not attend Activity Day OR less than 50% success on activities
Part I	Completed all topics on-time with 100% success on topics	Completed all topics on-time with 86-99% success on topics	Completed all topics on-time with 75-85% success on topics	Completed all topics on-time with 61-74% success on topics	Completed all topics on-time with 50-60% success on topics	Not completed on-time OR missing topics OR less than 50% success on topics
Part II	Completed all topics on-time with 100% success on topics	Completed all topics on-time with 86-99% success on topics	Completed all topics on-time with 75-85% success on topics	Completed all topics on-time with 61-74% success on topics	Completed all topics on-time with 50-60% success on topics	Not completed on-time OR missing topics OR less than 50% success on topics
Part III	Completed all topics on-time with 100% success on topics	Completed all topics on-time with 86-99% success on topics	Completed all topics on-time with 75-85% success on topics	Completed all topics on-time with 61-74% success on topics	Completed all topics on-time with 50-60% success on topics	Not completed on-time OR missing topics OR less than 50% success on topics

There will be a quiz on these topics within the first days of school.

Below is a list of supplies you will NEED for AP Calculus. Shop for the items when they are on sale and be prepared the first day of school. AP Calculus is a college-level course and you are expected to be prepared with your materials each day.

AP Calculus Supplies Needed:

- Pencils/Erasers
- Binder
- Paper
- Graphing Calculator (TI-Nspire CX or TI-Nspire CX CAS)

***** **YOU MUST HAVE A GRAPHING CALCULATOR** *****
***** **EVERY DAY, IN CLASS AND AT HOME** *****

AP Calculus AB Summer Work 2019-2020

Part I: Must be completed by June 19th

- a) **Limits:** Analyzing limits graphically
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-3/e/two-sided-limits-from-graphs>
- b) **Limits:** Analyzing limits numerically
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-4/e/creating-tables-to-approximate-limits>
- c) **Limits:** Analyzing limits numerically
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-4/e/finding-limits-numerically>
- d) **Limits:** Determining limits using direct substitution
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-5b/e/find-limits-by-direct-substitution>
- e) **Functions:** Composing Functions & Modeling Situations
<https://www.khanacademy.org/math/algebra2/manipulating-functions/quiz/combining-and-composing-modeling-functions-quiz>
- f) **Polynomials:** Factoring polynomials
<https://www.khanacademy.org/math/algebra2/polynomial-functions/quiz/factoring-polynomials-special-product-forms-alg2-quiz>
- g) **Polynomials:** Zeros of polynomials and End Behavior
<https://www.khanacademy.org/math/algebra2/polynomial-functions/quiz/graphs-of-polynomials-quiz>

Part II: Must be completed by July 10th

- a) **Limits:** Determining limits using direct substitution
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-5b/e/identify-undefined-limits-by-direct-substitution>
- b) **Limits:** Determining limits by factoring & rationalizing
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-6/e/two-sided-limits-using-algebra>
- c) **Limits:** Determining limits by factoring & rationalizing
https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-6/e/limits_2
- d) **Rational Relationships:** Multiplying & dividing rational expressions
<https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/quiz/multiplying-and-dividing-rational-expressions-quiz>
- e) **Rational Relationships:** Adding & subtracting rational expressions
<https://www.khanacademy.org/math/algebra2/rational-expressions-equations-and-functions/quiz/nested-fractions-quiz>

Part III: Must be completed by Aug 7th

- a) **Limits:** One-sided limits
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-3/e/one-sided-limits-from-graphs>
- b) **Limits:** One-sided limits
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-4/e/one-sided-limits-from-tables>
- c) **Limits:** One-sided limits
<https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-3/e/connecting-limits-and-graphical-behavior>
- d) **Trigonometry:** Trigonometric values of special angles
<https://www.khanacademy.org/math/algebra2/trig-functions/modal/e/trigonometric-functions-of-special-angles>
- e) **Exponentials & Logarithms:** Solving exponential models
<https://www.khanacademy.org/math/algebra2/exponential-and-logarithmic-functions/quiz/solving-exponential-models-quiz>
- f) **Advanced Equations & Functions:** Solving equations by graphing
<https://www.khanacademy.org/math/algebra2/advanced-functions/quiz/solving-equations-by-graphing-quiz>