

Pre-Calculus Honors Syllabus 2017-18

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Good mathematics is not about how many answers you know, it's about how you behave when you don't know.

COURSE DESCRIPTION

Pre-Calculus weaves together previous study of algebra, geometry, and mathematical functions into a preparatory course for Calculus. The course focuses on mastery of critical skills and exposure to new skills necessary for success in subsequent math courses. Throughout the course, Common Core standards are taught and reinforced as the student learns how to apply the concepts successfully. Topics include fundamental concepts of Algebra, functions and graphs, polynomials and rational functions, exponential and logarithmic functions, trigonometric functions, analytic trigonometry, systems of equations and inequalities, matrices, conic sections, and an introduction to Calculus.

During the year students will work collaboratively with others as they use problem-solving strategies, complete investigations, perform critical analysis, and justify their thinking effectively. The course is balanced between procedural fluency (algorithms and basic skills), deep conceptual understanding, strategic competence (problem solving), and adaptive reasoning (application and extension).

COMMON CORE STATE STANDARDS - MATHEMATICAL PRACTICES

- 1) Make sense of problems and persevere in solving them.
- 2) Reason abstractly and quantitatively.
- 3) Construct viable arguments and critique the reasoning of others.
- 4) Model with mathematics.
- 5) Use appropriate tools strategically.
- 6) Attend to precision.
- 7) Look for and make use of structure.
- 8) Look for and express regularity in repeated reasoning.

COURSE LEARNING OBJECTIVES

- 1) Demonstrate understanding of functions, and their properties using appropriate mathematical notation.
- 2) Perform high level graph analysis.
- 3) Be able to identify and graph standard function types including: polynomial, rational, square root, cube root, exponential, logarithmic and trigonometric.
- 4) Be able to model and solve real world problems by applying properties of the appropriate function type.
- 5) Demonstrate logical thinking skills by justifying solutions and interpreting problem statements.

MATERIALS

- PreCalculus CPM Textbook
- **REQUIRED** materials
 - ✓ Graph Paper Notebook
 - ✓ 3-Ring Binder there WILL be handouts, you WILL need them.
 - ✓ Pencils lead, eraser, sharpener, etc.
 - ✓ Calculator **TI-84** or higher
 - ✓ 4-5 colored pens/pencils
 - ✓ Ruler 6 inch is easiest to carry (optional but really useful)

<i>Classroom Wish List - Glue sticks, 12 in rulers, 11x14 poster paper,</i>							
tissues, black or blue dry erase markers, regular markers.							
Thank you!							
OSA Math Department: TI-84 Graphing Calculators							

GRADING PERCENTAGES

А	93 - 100%	B+	87 - 89%	C+	77 – 79%	D+	67 - 69%	F	< 60%
A-	90 - 92%	В	83 - 86%	С	73 – 76%	D	63 - 66%		
		B-	80 - 82%	С-	70 – 72%	D-	60 - 62%		

GRADING CATEGORIES

Mastery - Individual Assessment 70% - Projects, Presentations, etc. 15% Homework/Classwork10%Pre-Assessments(Minis)5%

Total Mastery 85%

CLASSWORK/HOMEWORK

It is expected that homework will be completed to the best of a student's ability and in a timely manner. There are many resources that are available for help if needed.

STUDENT EXPECTATIONS

- **Student Handbook:** All policies in the student handbook will be in effect.
- **Attendance**: Students are expected to be present and on-time. Attendance is a critical component to success in this course. If you must be absent **YOU** are responsible to obtain the information you missed.
- **Participation**: Class participation is another key component. Be present in the classroom. Working with your team, working on the assigned problems, paying attention to lectures or presentations, etc.
- **Electronic Devices**: Earphones are **NEVER** allowed in the classroom. Students may only use electronic devices when authorized by Ms. Harris.

REALLY IMPORTANT! I am here teaching because I WANT you to succeed. If you are having trouble or feeling overwhelmed by this class, come and see me. DON'T wait until the last minute to discuss your concerns or get help.

Please detach and return this page to Ms. Harris.

For Students

I have read and understand the expectations for this class.

Student Name: (Printed)	Period:					
Student Signature:						
For Parents/Guardians I understand the expectations of my student. I have read for this course.	the syllabus					
Parent/Guardian Name: (Printed)						
Parent/Guardian Signature:						
I use the phone and email information that is collected by OSA to contact parents/guardians. If you wish to add to that information, you may do so, but this is optional.						
Alternative Phone:						
Alternative Email:	-					
Comments (anything you would like me to know or be av	vare of)					