



# MANASQUAN HIGH SCHOOL

## HONORS ALGEBRA II

### MUST-HAVE SKILLS FOR A SMOOTH FRESHMAN TRANSITION:

#### 1. Access to and Proficiency with a Graphing Calculator

- (Texas Instrument only – ex. TI-84 or TI-84 Plus) since they will be used to visualize functions and solve complex problems efficiently.

#### 2. Participation and Asking Questions

- Engaging in class discussions and seeking clarification when needed will improve understanding. It is expected that students will utilize Unit Lunch to receive extra help.

#### 3. Time Management

- Honors-level coursework moves quickly, so keeping up with assignments and preparing ahead for tests is crucial.

#### 4. Time Management

- Time management is crucial to being successful in this class and being able to complete assignments and assessments in the allotted time.

#### 5. Proficiency in the following skills:

- Factoring
- Solving one and two-step equations
- Solving inequalities
- Graphing and writing linear functions
- Computing problems without a calculator

#### 6. Critical Thinking

- Students should expect more challenging problems, multi-step calculations, and open-ended questions that require deeper understanding and critical thinking.

This class prepares students for higher-level math courses like Precalculus, Calculus, and AP Calculus.

The algebraic properties of the real number system are reviewed, as are equations of the first and second degree. The real number system is extended to the complex number system. Radical, exponential, logarithmic, polynomial, rational, and periodic functions, along with trigonometry are studied in detail. An emphasis is placed on mathematical modeling and applications. Sequences, series, parametric, and polar functions are covered as time permits.

#### Prerequisites:

- Teacher Recommendation
- 8th grade Geometry final course grade (>90)

#### DEVELOPING SKILLS IN:

- polynomial functions
- exponential and logarithmic functions
- rational expressions,
- complex numbers
- statistics
- introduction to trigonometry