

Pacing Guide
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Math II

The following is a rough pacing guide. It will be adjusted to meet the needs of students.

Week 1 - 2

1. Define algebra theorems, laws and postulates.
2. Perform algebraic two column proofs.
3. Define geometry terms and notation.
4. Solve area and volume problems.
5. Complete geometric proofs concerning perpendicular and parallel lines.
6. Complete test on geometric and algebraic proofs.

Week 3-5

1. Complete proofs of congruence and similarity of triangles.
2. Define special lines of triangles and their intersections:
 - a. medians (centroid)
 - b. perpendicular bisectors (circumcenter)
 - c. angle bisector (incenter)
 - d. altitudes (orthocenter)
3. Solve triangle problems based on theorems.
4. Perform translations and transformations of triangles.
5. Complete test on congruence and similarity of triangles.

Week 6-7

1. Define sine, cosine, and tangent in terms of right triangles and the unit circle.
2. Find arc length and area of sectors.
3. Solve right triangle problems.
4. Solve simple right triangle vector problems.
5. Complete test on solving right triangles.

Week 8

1. Review rules of exponents.
2. Simplify roots and exponential terms.
3. Simplify simple expressions.
4. Introduce complex and imaginary numbers.
5. Complete a test on rules of exponents and combining like terms.

Week 9

1. Define polynomials and polynomial functions.
2. Complete operations on polynomials.

- a. addition b. subtraction c. multiplication d. division
3. Define “special” multiplication rules.
 4. Complete test on polynomial operations.

Week 10-11

1. Factor polynomials.
2. Define fundamental theorem of algebra.
3. Graph factored polynomials.
4. Create polynomials with various roots and characteristics.
5. Graph functions based on parent and child functions.

Week 12-13

1. Define and solve quadratics.
2. Define parabolas and circles.
3. Graph quadratics and circles written in various forms.
4. Find the equations of parabolas given various information.

Week 14

1. Define probability and odds.
2. Define counting with permutations and combinations.
3. Calculate simple probabilities and conditional probabilities.

Week 15-16

1. Define statistics and parameters.
2. Discuss experiments, sampling, surveys, censuses, and observational studies.
3. Define normal curve and empirical rule.
4. Make inferences based on statistics.

Week 17-18

1. Review for final exam.