

## **MATH II – TOPICS**

### **Unit 1 - Connecting Algebra and Geometry Through Coordinates**

Lesson 1: Introductory Terms and Symbols

Lesson 2: Translations and Reflections

Lesson 3: Rotations

Lesson 4: Dilations – Horizontal and Vertical Stretches

Lesson 5: Distance, Midpoint and Ratio Point

Lesson 6: Circles and Their Equations

### **Unit 2 - Congruence and Equality**

Lesson 7: Sequence of Rigid Motion

Lesson 8: Congruence and Equality

Lesson 9: Congruent Triangles

Lesson 10: Beginning Proofs

Lesson 11: Congruent Triangle Proofs

Lesson 12: CPCTC

Lesson 13: Coordinate Proofs

### **Unit 3 – Exponents and Radicals**

Lesson 14: Property of Exponents

Lesson 15: Rational Exponents

Lesson 16: Simplifying Radicals

Lesson 17: Radical and Rational Exponent Equations

Lesson 18: Direct and Inverse Variation

## **Unit 4 – Similarity and Trigonometry**

Lesson 19: Dilations and Similarity

Lesson 20: Pythagorean Theorem

Lesson 21: Special Right Triangles

Lesson 22: Trigonometric Ratios

Lesson 23: Trigonometry Applications

Lesson 24: Triangle Area and Perimeter

Lesson 25: Law of Sines/Cosines

## **Unit 5 – Polynomials**

Lesson 26: Polynomial Vocabulary and Operations

Lesson 27: Factoring GCF and Quadratics

Lesson 28: Factoring Quadratics Using Grouping

Lesson 29: Solving Quadratic Equations (X-Box Method)

Lesson 30: Graphing Quadratic Equations

Lesson 31: Quadratics Formula and Discriminants

Lesson 32: Solving Systems of Linear Equations

Lesson 33: More Systems and Word Problems

## **Unit 6 – Probability**

Lesson 34: Set Theory

Lesson 35: Theoretical Probability

Lesson 36: Dependent and Independent Events

Lesson 37: Conditional Probability

Lesson 38: Permutations and Combinations

## **Unit 7 - Functions and Modeling**

Lesson 39: Linear Modeling

Lesson 40: Quadratic Modeling

Lesson 41: Growth and Decay

Lesson 42: Compound Interest