

# INTEGRATED MATH 2 - KEY OBJECTIVES

## TRIANGLE TRIGONOMETRY, THE UNIT CIRCLE & TRIGONOMETRIC GRAPHS

### Essential Questions:

How can we find the measurement of objects that we can't measure physically?

What does a pendulum, a musical instrument and the ocean tides have in common?

### Section 13-1: Right-Triangle Trigonometry (pages 828-835)

- Use the sine, cosine and tangent trigonometric ratios to solve for a missing side of a triangle.
- Use the sine, cosine and tangent trigonometric ratios to solve for a missing angle of a triangle.
- Apply trigonometric ratios to a variety of practical applications.

### Section 14-2: The Law of Cosines (pages 894-901)

- Use the Law of Cosines to write equations to solve for a side or an angle.
- Apply the Law of Cosines to a variety of practical applications.

### Section 14-1: The Law of Sines (pages 886-893)

- Use the Law of Sines to write equations to solve for a side or an angle.
- Apply the Law of Sines to a variety of practical applications.
- Find the area of a non-right triangle.

### Section 13-2: Angles of Rotation (pages 836-842)

- Draw angles in standard position.
- Find co-terminal angles.

### Section 13-3: Trigonometric Functions of Any Angle (pages 843-850)

- Given a special angle, determine the corresponding unit circle coordinates.
- Given unit circle coordinates, determine the corresponding special angle.
- Find the sine, cosine or tangent of a special angle using unit circle coordinates.
- Given an equation, find all special angle solutions between  $0^\circ$  and  $360^\circ$ .

### Section 13-5: Graphing Trigonometric Functions (pages 858-866)

- Graph sine, cosine and tangent functions by hand.
- Apply and identify individual transformations (horizontal and vertical shift, horizontal and vertical dilations, reflections) to sine, cosine and tangent functions by hand.
- Know and apply the terms "amplitude" and "period".
- Solve equations using trigonometric graphs.
- Use trigonometric graphs to solve practical applications.
- Given data, develop a trigonometric model (using transformations), evaluate the fit and use the model to make predictions.