

## Precalculus

### *Trigonometric Applications*

The list below contains the specific *learning targets* for the unit on trigonometric applications. Before the unit test, you should be able to place a check next to each statement as being true.

- I can solve triangles using the Laws of Sines and Cosines.
- I can use a variety of techniques to find area of polygons.
- I can interpret vectors as representing magnitude and direction.
- I can calculate the magnitude and/or direction of a given vector.
- I can perform the following vector operations graphically and algebraically:
  - vector addition and subtraction
  - scalar multiplication
  - vector multiplication (dot product)
- I can use the dot product to find the angle between two vectors.
- I can use vectors to solve problems involving displacement and work.

### Textbook Assignments

The exercises below are from *Precalculus: A Graphing Approach* by Hungerford, Jovell, and Mayberry. These specific problems are the bare minimum that should be completed after each lesson, but you are encouraged to attempt more if needed.

- 10.1 Law of Cosines **pg 622: 1, 5, 7, 9, 13, 17**
- 10.2 Law of Sines and Area **pg 634: 9, 13, 23, 25, 29, 31, 35, 37**
- 10.1 Triangle Applications **pg 622: 25, 29, 31, 37**
- 10.2 Triangle Applications **pg 634: 40, 41, 45, 55**
- 10.5 Vector Operations **pg 660: 1, 9, 11, 21, 23, 25**
- 10.6 Direction Angles **pg 667: 13-27 (odd)**
- 10.6 Vector Applications **pg 667: 33, 37, 41, 47, 51**
- 10.6 Dot Product **pg 679: 1, 9, 13, 19-21**
- 10.6 Dot Product Applications **pg 679: 43, 47, 49, 51, 53**

*Assignments are subject to change in class.*