**Ch. 8 Vectors**

**8.1 Introduction to Vectors**

1) I can determine whether a quantity is a vector quantity or scalar quantity.

2) I can represent and operate with vectors geometrically.

3) I can solve vector problems and resolve vectors into their rectangular components.

**8.2 Vectors in the Coordinate Plane**

1) I can express vectors in coordinate form.

2) I can determine the magnitude of a vector in the coordinate plane.

3)I can represent and operate with vectors in the coordinate plane.

4) I can write a vector as a linear combination of unit vectors.

**8.3 Dot Products and Vector Projections**

1) I can find the dot product of two vectors and use the dot product to find the angle between them.

2) I can find the projection of one vector onto another.

**8.4 Vectors in Three-Dimensional Space**

1) I can plot points and vectors in the three-dimensional coordinate system.

2) I can determine the distance and midpoint of two points on a three-dimensional coordinate system.

3) I can express algebraically and operate with vectors in space.

**8.5 Dot and Cross Products of Vectors in Space**

1) I can find the dot product to determine orthogonal vectors.

2) I can find dot products of angles between vectors in space.

3) I can find cross products of vectors in space and use cross products to find area and volume.