**Ch. 9 Polar Coordinates and Complex Numbers**

**9.1 Polar Coordinates**

1) I can graph points with polar coordinates.

2) I can graph similar polar equations.

3) I can find the distance between two polar coordinates.

**9.2 Graphs of Polar Equations**

1) I can graph polar equations.

2) I can graph and identify classical curves and determine different types of symmetry.

**9.3 Polar and Rectangular Forms of Equations**

1) I can convert between polar and rectangular coordinates.

2) I can convert between polar and rectangular equations.

**9.4 Polar Forms of Conic Sections**

1) I can identify polar equations of conics.

2) I can write and graph the polar equation of a conic given its eccentricity and the equation of its directrix.

**9.5 Complex Numbers and De Moivre’s Theorem**

1) I can convert complex numbers from rectangular to polar form and vice versa.

2) I can find products, quotients, powers, and roots of complex numbers in polar form.