Semester 1 Final

To prepare for the final, you should be able to:

- □ convert between degrees and radians (7.1)
- \Box find arc length (7.1)
- \Box find sector area (7.1)
- \Box find the linear speed and angular speed of an object traveling in circular motion (7.1)
- \Box convert units (ex mi/hr into m/sec) (7.1)
- □ find exact values of expressions using fundamental identities and the complimentary angle theorem (7.2)
- □ use a calculator to approximate values of trigonometric functions of angles (7.3)
- □ model and solve applied problems involving right triangles (7.3)
- \Box find exact values of trigonometric functions of all angles on the unit circle (7.3 7.4)
- □ find the values of the six trigonometric functions given the value of one trig function and the quadrant in which the angle lies or given the values of two trig functions (7.4)
- □ find the quadrant in which an angle lies given signs of two trigonometric functions (7.4)
- \Box graph sine, cosine, cosecant, secant, tangent, and cotangent graphs (7.6 7.8)
- \Box find domain, range, amplitude, asymptotes, and period of all 6 functions (7.6 7.8)
- □ list transformations for all 6 trig functions (7.6 7.8)
- \Box write sine/cosine function given graph (7.6 7.8)
- □ make a sinusoidal model for a situation (7.8)
- \Box find the exact values of inverse trig functions (8.1 8.2)
- \Box find exact values of composite trig functions (8.1 8.2)
- □ simplify trigonometric expressions (8.3)
- □ establish identities (8.3)
- □ use sum and difference formulas to find exact values (8.4)
- □ use double-angle and half-angle formulas to find exact values (8.5)
- \Box solve equations with single trig functions (8.7)
- \Box solve trig equations in quadratic form (8.8)
- □ solve trig equations using identities (8.8)
- □ solve a right triangle using right triangle trig (9.1)
- □ solve a triangle (SAA, ASA, SSA) using Law of Sines (9.2)
- \Box solve for sides/angles of triangles in an application (9.2 9.3)
- \Box find the area of a triangle (9.4)
- □ convert between rectangular and polar coordinates (10.1)
- \Box transform equations between polar to rectangular form (10.1 10.2)
- □ graph polar equations (10.2)
- □ convert a complex number from rectangular form to polar form (10.3)
- □ find products and quotients of complex numbers in polar form (10.3)
- □ use De Moivre's Theorem (10.3)
- \Box find the magnitude of a vector (10.4)
- □ add and subtract vectors algebraically (10.4)
- \Box find the dot product of two vectors (10.5)
- \Box find the angle between two vectors (10.5)

Suggested Review:

7.1 – 7.8	pg. 594 #3, 5, 9, 13, 21, 27, 35, 49, 53, 59, 75, 80, 82, 87, 89, 96, 101
8.1 – 8.8	pg. 664 #5-7, 9, 21, 27, 41, 47, 51, 73, 79, 97, 101, 109, 113
9.1 – 9.4	pg. 707 #13, 21, 25, 29, 41
10.1 – 10.5	pg. 766 #3, 7, 13, 23, 25, 31, 35, 43, 55, 59, 61, 71

