

Semester 2 Review Topics

Chapter 6 Trigonometric Functions

Radians vs. Degrees
Angular Velocity vs. Linear Velocity
Arc Length
Graph Transformations of the Six Trig Functions
Determine Amplitude and Period, Phase Shift, asymptotes
Find the Equation for a Sinusoidal Graph
Review Chapter 6 p.438-444

Chapter 7 Analytic Trigonometry

Trigonometric Identities (verify)
– Pythagorean, Reciprocal, Quotient
Sum and Difference Formulas
(find exact values and Verify Identities)
Double-Angle and Half-Angle formulas
(find exact values and Verify Identities)
Inverse Trigonometric Functions
(find exact values and Verify Identities)
Solving Trigonometric Equations
Review Chapter 7 p.502-505

Chapter 8 Trigonometric Application

Right Triangle Trigonometry
Law of Sines
Law of Cosines
Angles of Elevation and Depression
The Area of a Triangle
Area of a Sector, Area of Circle
Review Chapter 8 p.552-556

Chapter 9 Polar Coordinates/ Vectors

Polar Coordinates
Polar Graph and Equations
Complex Numbers in CIS (polar) format or $a + bi$
(rectangular) format
Add, Multiply, subtract, raise to a power,
take the root of complex numbers
DeMoivre's Theorem
Vectors – magnitude & direction, unit vector, add,
subtract, resultant
Orthogonal & Normal vs. Parallel
Dot Product
Vectors in Space
Cross Product
Equations of Planes
Review Chapter 9 p.630-633

10.7 Parametric Equations

Graph Parametric Equations
(by hand and Calculator)
Find rectangular Equation for a Curve Defined
Parametrically
Find Parametric Equations for Curves Defined by
Rectangular Equations
Use Time as a Parameter in Parametric Equations

11.6 Partial Fractions

Decompose rational expressions P/Q where Q

- Has only Nonrepeated Linear Factors
- Has Repeated Linear Factors
- Has only Nonrepeated Irreducible Quadratic Factors

Chapter 12 Sequences/Series

12.5 – Binomial Theorem, find expansion or
particular term.

Sequences
Arithmetic sequences
Geometric sequences
Series, Sum and Sigma Notation / Formulas
Review chapter 12 p.852-854

Review Problems

No calculator:
p. 441 (11, 15, 25, 30, 43, 66, 67)
p. 504 (8, 10, 18, 38, 41b, 63, 84, 93)
p. 631 (11, 13, 25, 26, 41, 77, 82, 83, 95)
p. 776 (11, 29)
p. 701 (7, 33)
p. 822 (57, 61)
p. 853 (3, 13, 25, 27, 33, 37, 41, 51)
Calculator:
p. 537 (31)
p. 553 (7, 13, 21, 33)
p. 613 (19, 25)
p. 632 (83, 89)
p. 830 (49)
p. 854 (60, 61)
p. 895 (5, 29, 35, 38, 39)