

## MAC 1147      STUDY GUIDE FOR THE FINAL

- 1.) Solving a polynomial (or rational) inequality. (Reference: Examples 1, 3, 4 on pages 370–372.)
- 2.) (i) Expanding and condensing logarithmic expressions; (ii) Using change-of-base formula. (Reference: Examples 3, 4, 5, 6, and 8 on pages 452–456.)
- 3.) Graphing a trigonometric function using transformations. Finding the period and amplitude of the given function. (Reference: Examples 4 and 5 on pages 565–567.)
- 4.) Finding exact values of inverse trigonometric functions. (Reference: Examples 1 and 2 on page 603–604; Exercises 13, 15, 17, 19, 21, 23 on page 612.)
- 5.) Converting an expression involving an inverse trigonometric function into an algebraic expression. (Reference: Example 6 on page 617–618; Exercises 57 and 59 on page 619.)
- 6.) Verifying trigonometric identities. To do this, you should know the basic trigonometric identities. (Reference: Examples 2–8 on pages 622–624; Exercises 24, 42 and 80 on page 625.)
- 7.) Finding exact values of trigonometric functions using periodic properties, even-odd properties and sum/difference formulas. (Reference: Examples 1, 2, 3 and 4 on pages 628–630; Examples 6, 7, and 8 on pages 546–548; Examples 2 and 3 on pages 556 and 557.)
- 8.) Finding exact values of trigonometric functions using double angle/half angle formulas. (Reference: Examples 1, 5 and 6 on pages 639–642; Exercises 7, 11, 19, 23 on pages 643–644.)
- 9.) Using power reducing formulas. (Reference: Example 3 on pages 639–640; Exercise 41 on page 644.)
- 10.) Using sum-to-product and product-to-sum formulas. (Reference: Examples 1 and 2 on pages 647–648.)