

Objectives for Test 2  
Monday, Oct. 27, 2008  
Sections 6.7, 7.1, 7.2, and 7.3, 10.1-10.3

1. Solve simple trig equations over a requested interval; for example  $[0, 2\pi)$ ,  $[0, 360^\circ)$ ,  $(-\infty, \infty)$ , or other intervals, providing
  - a. exact values of angles measured in radians (when given special angles as in 3a above) **6.7** #7-14, 40-42
  - b. decimal approximations using the inverse trig functions **6.7** 1-6, 30-39, 43, 49, 50, 53 **Ch 6 Review** 39-43, 48-53, 56, 60 and Law of Sines and Cosines problems.
  - c. decimal approximations graphically. **6.7** # 15, 16, 27-29, 56, 57*Be aware of when more than one solution exists!* Be able to sketch the angle or angles.
2. Find the reference angle of  $\theta$ . Remember it is acute (and thus positive) angle formed by the  $x$ -axis and the terminal side of  $\theta$ .  
Section **6.7** #17-24
3. Understand the meaning of the notation  $\sin^{-1}x$ ,  $\arcsin x$ ,  $\sin^2x$ ,  $\sin x^2$ , etc. Section **6.7** #54, 55 and **Ch 6 Review** #58
4. Solve for sides and angles of a triangle using the Law of Sines and the Law of Cosines. Know when to use which.  
Section **7.1** #1-32, 38, 39 and **Ch 7 Review** #2-6
5. Find an angle or angles of a triangle if given other information. Understand the Ambiguous Case.  
See Section **7.1** #16-25 and Internet practice
6. Use identities to simplify trig expressions. Determine if one expression involving trig functions is identical to another one.  
Section **7.2** #1-8, 12-15, 24, 33, 36, 39 and **Ch 7 Review** #7-10
7. Solve trigonometric equations algebraically. If necessary, replace an expression with an appropriate identity and provide exact answers on a requested interval. Section **7.2** # 17, 18, 41 and **Ch 7 Review** #26, 28
8. Use trigonometric identities to find algebraic expressions Section **7.2** #42-46 and **Ch 7 Review** #29, 38abcd
9. If given the sketch of two vectors, sketch their sum, difference, etc. as Section **10.1** #5
10. Write a displacement vector and find its magnitude. Section **10.1** 12, 19 and **Ch 10 Review** 34, 35
11. Find the magnitude and direction of a vector. Section **10.2** #15, 16, 19
12. Write a vector in component form Section **10.2** #5, 6, 8, 13, 14, 24
13. Perform vector arithmetic. Section 10.2 1-4, Section **10.3** 1-10
14. Use vectors to solve applied problems. See Section **10.2** 1-4 and Section **10.3** 1-10
15. Work with  $n$ -dimensional vectors,  $n > 2$  **10.2** 9-12, 25, 28 and **10.3** 1-12, 15 and **Ch 10 Review** 17-19.

Chapter 6 Check Your Understanding (page 299): 1-11, 63-87

Chapter 7 Check Your Understanding (page 351): 2-30

Chapter 10 Check Your Understanding (page 486): 1-6, 9, 10, 13, 14, 15, 17