The second exam is on Wednesday February 27th. You will have one hour, 6:30pm-7:30pm, to complete the exam. NO NOTES will be allowed during the exam. You may use a calculator during the exam, but you must SHOW ALL OF YOUR WORK to receive credit. When asked for an exact answer no credit will be given for decimal approximation.

The exam will cover material from sections 4.7, 4.8, 5.1, 5.2, 5.3, 5.4 and 5.5. Make sure you are comfortable with all of the assigned homework problems from these sections. The assigned homework from these sections are due at the beginning of class on February 27th.

YOU NEED TO MEMORIZE the Fundamental Identities and the Sum and Difference Formulas. I WILL GIVE YOU the Multiple Angle, Power Reducing and Product-to-Sum Formulas on the exam. (You will still need to know how and when to use them!).

### Topics and Breakdown of the Exam

- **(36 points) Inverse Trigonometric Functions and Applications**
  - You need to know the basic properties (domain, range, and key relationship with corresponding trig. function) of the inverse trig. functions arcsine, arccosine and arctangent.
  - You will be asked to find the exact values of various expressions involving trig. functions, inverse trig. functions and their compositions.
  - You will be asked to write an algebraic expression that is equivalent to a given expression involving the composition of a trig. function with an inverse trig. function.
  - You will be asked to solve an applied problem involving directional bearings.

- **(24 points) Verifying Trigonometric Identities**
  - You will be asked to verify three trigonometric identities.

- **(24 points) Solving Trigonometric Equations**
  - You will be asked to solve three trigonometric equations.

- **(16 points) Evaluating Trigonometric Functions Using the Sum, Difference, Multiple Angle and Product-to-Sum Formulas**
  - You will be asked apply the Sum, Difference, Multiple Angle and/or Product-to-Sum Formulas to determine the exact value of a trig. function of a given angle.
  - You will be asked apply the Sum, Difference, Multiple Angle and/or Product-to-Sum formulas to determine the exact value of a trig. function of an angle under given constraints.
Practice Problems

- **Inverse Trigonometric Functions and Applications**
  - pg. 326/327: 14, 46, 64, 66
  - pg. 338: 38

- **Verifying Trigonometric Identities**
  - pg. 362: 20, 32, 43
  - pg. 380: 61, 64
  - pg. 390: 68, 70

- **Solving Trigonometric Equations**
  - pg. 371: 18, 28, 34, 40
  - pg. 380: 72, 73
  - pg. 389: 8

- **Evaluating Trigonometric Functions Using the Sum, Difference, Multiple Angle and Product-to-Sum Formulas**
  - pg. 379: 42
  - pg. 389: 33, 36, 38