

Math 232 Spring 2003  
Quiz 2 (1/28)

Name: \_\_\_\_\_

*This quiz is worth 10 points and you have 10 minutes to complete it. Show all work and circle your final answers. You will be graded on the clarity of your work, so make sure I can tell how you arrived at your answer.*

**Calculators ARE NOT allowed today.**

***Circle ONE of the following problems and solve it, for ten points.***

**A.** (10 pts) Your company produces cylindrical metal oil drums that must each hold 40 cubic feet of oil. How should the oil drums be constructed so that they use as little metal as possible? (Be sure that you make clear how you know that your answer is a minimum.)

**B.** (10 pts) A rock dropped into a pond causes a circular wavefront of ripples whose radius increases at 4 inches per second. How fast is the area of the circle of ripples expanding at the instant that the area of the circle is 100 square inches?