Math 1031 College Algebra and Probability
Self-Quiz 1

September 21, 2010

Name:

This quiz is designed to give you some practice in an exam-like setting before our first midterm on Friday. It will not be graded. Rather, it is a study tool for you to gauge your own preparation.

1. Solve the inequality and express the solution set in interval notation.

\[
\left| \frac{x - 2}{2} \right| < 10
\]

2. Solve the inequality and express the solution set in interval notation.

\[
2x^2 - 5x + 2 \leq 0
\]
3. Find the real solutions to the equation.

\[ 4x^4 - 4x^2 - 3 = 0 \]

4. The base of a triangle is one third of the height. The area of the triangle is 24 square inches. (The area of a triangle is one half times the base times the height.)

(i) Write an equation that represents this situation in terms of \( h \), the height of the triangle.

(ii) Solve the equation.

(iii) What is the length of the base of the triangle?