I. Prior Knowledge

- You need a common denominator to add or subtract fractions.
- Reverse the inequality sign, when multiplying, or dividing, both sides by a negative number.
- Order of Operations: PEMDAS = Please Excuse My Dear Aunt Sally = Parenthesis first, { }, then Exponents, then Multiple or Divide in order from left to right, and finally Add or Subtract in order from left to right. “Multiple or Divide in order from left to right” does not mean multiply first and then divide; it means to do the operations in order that you read them.
- Warning: $-3^2 = -(3^2) = -9$ since powers come before products, while $(-3)^2 = (-3)(-3) = 9$
- Examples of exact answers are $\frac{1}{3}, \sqrt{5}, \pi, 2 \cdot \frac{7}{2}$, and if approximate answers are requested: 0.33, 2.236, 1.57, 4.816. Approximate answers will often say “rounded to 3 places”, or “rounded to four places”.
- 6.4298 rounded to the 1st decimal place is 6.4, rounded to the 2nd decimal place is 6.43, rounded to the 3rd decimal place is 6.430, rounded down to the nearest integer is 6, and rounded up to the nearest integer is 7. A common error: round to 3 decimal places and write your answer as 6.43.
- Quadratic Formula: The solution to any quadratic equation of the form $ax^2 + bx + c = 0$, $a \neq 0$, is $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$.
- $ab = 0$ if and only if $a = 0$ or $b = 0$; this is true only if one side is equal to zero. The product must be 0!
- $(a + b)^2 \neq a^2 + b^2$; $(a + b)^2 = (a + b)(a + b) = a^2 + 2ab + b^2$; $\sqrt{a^2 + b^2} \neq a + b$

II. This Week

- Properties of Real Numbers (commutative, associative, identity, inverse, distributive)
- Types of Real Numbers (natural numbers, integers, rationals, irrationals)
- Absolute value and distance formula
- Properties of Exponents and Radicals
- Polynomial Expressions: $a_nx^n + a_{n-1}x^{n-1} + \cdots + a_2x^2 + a_1x + a_0$

III. Resources and Tips:

- Print out your PreCalc Chronicles and keep them with your notes!
- After your first Math 150 lecture, set up your online mathematics homework at http://www.math.tamu.edu/courses/eHomework/
- Thoroughly read your Math 150 first day handout.
- BEFORE attending the Week-In-Review each week, do the Math 150 WIR Problems at http://www.math.tamu.edu/courses/weekinreview.html.
- Attend Week-In-Review #1 (WIR 1) on __________________ in room __________________
  (Answer on WIR page)

IV. Quotes and Jokes

**Question:** Expand $(a + b)^n$

**Answer:**

\[ (a + b)^n = (a + b)^n \]
\[ = (a + b)^n \]
\[ = (a + b)^n \quad \text{.... LOL} \]