Agenda

    Starters: Integer Arithmetic

    Main Activity: Tracing BASIC Programs

    Homework: Due Tuesday
                                See HWMath.net/IBCS

Complete the QUAD1 program on the TI-84 calculator to find the roots of a quadratic equation. The QUAD1 program for the graphing calculator can be completed incrementally - step by steps instructions can be found below in the Content Covered section.

Program requirements:
1. Prompt the user for a,b,c
2. Echo the values back to the user
3. Have error checking
    if A = 0 then
       send the user an error message
      stop the program
4. Calculate the value of $D = B^2-4AC$
5. If D < 0 then
       tell the user there are no real solutions
      stop the program
6. if D = 0
       tell the user why there will be only one real solution
7. calculate E, F (as needed) display values E,F (as needed)

Integer Arithmetic

When two integers are divided, and the result is treated as an integer, the result represents only the whole number of the quotient:

Example: 6 \ 4 = 1

The result is not a rounded floating point number.

The modulus operator returns the remainder when two integers are divided. In BASIC the modulus operator is MOD, in some programming languages you see this as the % operator.
You may have this on the TI84 calculator as the REMAINDER function (if not, you could write one).

Example: 6 mod 4 = 2

Practice Problems

Calculate using integer operations

1)   239 \ 24

2)   310 \ 30

3)   89 mod 12

4)   If the time is 11:30 a.m, what time will it be in 819 hours?