2012 Summer Workshop, College of the Holy Cross
Foundational Mathematics Concepts for the High School to College Transition

Day 8 – July 19, 2012

Chocolate Math

This is from an e-mail I received from a friend.

YOUR AGE BY CHOCOLATE MATH
Don't tell me your age; you'd probably lie anyway – but the Hershey Man will know!
YOUR AGE BY CHOCOLATE MATH
This is pretty neat.
DON'T CHEAT BY SCROLLING DOWN FIRST! It takes less than a minute. Work this out as you read. Be sure you don't read the bottom until you've worked it out! This is not one of those waste of time things, it's fun.

1. First of all, pick the number of times a week that you would like to have chocolate (more than once but less than 10)

2. Multiply this number by 2 (just to be bold)

3. Add 5

4. Multiply it by 50 – I'll wait while you get the calculator

5. If you have already had your birthday this year add 1762. If you haven't, add 1761.

6. Now subtract the four digit year that you were born.

You should have a three digit number

The first digit of this was your original number (i.e., how many times you want to have chocolate each week).

The next two numbers are ...

YOUR AGE! (Oh YES, it is!!!!!)
THIS IS THE ONLY YEAR (2012) IT WILL EVER WORK, SO SPREAD IT AROUND WHILE IT LASTS.

(i) Why does this work?

(ii) Why do you need the restriction in part 1.? (Certainly there are people who would like to eat chocolate more than 10 times a week.)

(iii) Why the rule in part 5.?

(iii) How can you change the problem to make it work next year?