Unit 1 Topic Outline

(test outline)

Know …

… the difference between a Project, a Package, and a Class.

… how to correctly make single-line and multi-line comments (remarks)

… the escape sequences \n, \", \\ and how to correctly implement them in a program.

… the difference between declaring and initializing (and how to do each for int, double, String, and boolean)

… naming conventions for variables and class names (things you can/can't do, things you should do)

… mixing variable types with mathematics (ints and doubles … what does the answer turn out to be … truncating?)

… how to create final variables and the consequences involved in using/changing them

… how to increment/decrement and solve code examples with incrementing/decrementing

… how to cast numbers as integers/double and know the impact that the cast may have on the numbers

… the correct order of operations (and where % falls in the order) for JAVA math problems

… how to find the answers to JAVA math problems involving +, -, *, /, %, +=, -=, *=, /=, and %=

… how to correctly round to the nearest positive integer and negative integer in JAVA

… how to round to 1, 2, or 3 places after the decimal (this involves shifting the decimal, (int), shifting back)

… how to use various pre-defined JAVA Math Methods and what they output

Math. abs(x), pow(x,y), sqrt(x), floor(x), ceil(x), min(x,y), max(x,y), random(), round(x), PI

… how to create a random number generator in JAVA that choose a random number between 1 and ?

… how to convert number types to other number types (decimal, binary, octal, hexadecimal)

… what Integer.MAX_VALUE is and why it equals what it does.

… what Integer.MIN_VALUE is and why it equals what it does.

… how to do all problems in all the Unit 1 worksheets (they are a good review for the exam).