

Create a functional program to compute BMI. Some needed steps: Input Height and Weight. Convert Height from Inches to Centimeters and weight from Pounds to Kilograms. Output a comment about the input based on the values.

Make this run!

Then Expand to Compute Body Mass Index (BMI)

$BMI = \text{Mass in KG} / (\text{Height in Meters})^2$ (^2 means Squared)

Convert the BMI value to respond to Over, Under and "Healthy" conditions. You will have to use google to research what BMI values separate those ranges.

(Note: I really hate BMI and don't think it is a good indicator of health!)

Here is an outline:

- Prompt for Height
- Input height
- Prompt for Weight
- Input weight
- Convert both to metric (2.540cm is 1 Inch, 100.0cm is 1.0 Meter, 1.0 Kilogram is 2.20462 Pounds) Hint: Uses these constants as provided...no precomputed values!
- Output those values
- Include at least one conditional to produce a comment (snarky or otherwise) about the input value.
- Convert to BMI, Output those results with some assessment and snarky comment.

Hint: Use the FULL constants as-is

Before you run the program, create some test cases with representative inputs and expected output. (Use an on-line calculator to compute some BMIs) Save these is TextCases.txt

Include required information in the .cpp file comments and in the output (Name and Class)

Copy the output results to a separate file (like HeightOut.txt). Note you will need more than one run of the program with different input values. Copy each of those into the one file for submission.

Upload three files to Canvas (main.cpp, HeightOutput.txt and TextCases.txt)

Upload as .cpp, .docx, .h, .hpp, .rtf or .txt Only!

Extra Credit (optional):

Experimentally show the precision of float, double and long double data types in C++.