1. using cmath functions
   - Write a program that asks the user to enter an integer, reads the integer from the keyboard, and then computes the square (e.g., $\text{pow}(10, 2)$) and the cube (e.g., $\text{pow}(10, 3)$) of the integer and outputs those values.
   - Echo back the user’s input and clearly label the square and cube output.
   - Don’t forget to \#include `<cmath>`
   - Compile and run your program to make sure it works.

2. using cctype functions
   - Write a program that asks the user to enter a word.
   - Then, using \texttt{cctype} functions, convert each letter in the word to the opposite case and output the result.
     For example, if I enter \texttt{Hello}, then the program should output \texttt{hELLO}.
   - \textit{Hint:} use \texttt{isupper()}, \texttt{islower()}, \texttt{tolower()} and \texttt{toupper}
   - Compile and run your program to make sure it works.

3. writing your own functions
   - Write a program that contains a function that will display the words “trick or treat”.
   - Invoke your function from the \texttt{main()}.
   - Compile and run your program to make sure it works.

4. passing a value parameter to a function
   - Make a copy of the program you wrote in step 1 above, and modify it as follows.
   - Write a function called \texttt{square()} which takes one integer argument and displays (using \texttt{cout}) the value of the argument squared.
   - Write another function called \texttt{cube()} which takes one integer argument and displays (using \texttt{cout}) the value of the argument cubed.
   - Now in the \texttt{main()}, after you get the user’s input, invoke your functions \texttt{square()} and \texttt{cube()} to perform the operations and display the result.
   - Compile and run your program to make sure it works.

\textit{(over for more FUNctions!!!)}
5. returning a value with a function
   - Make a copy of the program you wrote above.
   - Modify the two functions so that, instead of displaying the output, they return the value computed.
     i.e., the `square()` function returns the value of its argument squared and the `cube()` function returns
     the value of its argument cubed.
   - Now in the `main()`, adjust the code so that after you get the computed values back from `square()`
     and `cube()`, you display the values from `main()` (not inside the functions like you did in the previous
     step).
   - Compile and run your code to make sure it works.

6. passing a reference parameter to a function
   - Make a copy of the program you wrote above.
   - Modify the two functions so that, instead of returning the amounts computed as the functions’ return
     values, they take a reference parameter and change the value of the reference parameter inside the
     function.
   - Compile and run your code to make sure it works.