

# CSCI 136 C++ programming

## Lab exercise 3

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### (a) Exponentiation

Implement a function called `exp` that takes two parameters:

- `b`: a base which is a real number
- `n`: an exponent, which is a **positive** integer

and returns the value  $b^n$ , i.e.  $b$  multiplied by itself  $n$  times.

### (b) Cube root

Newton's method for cube root is based on the fact that if  $y$  is an approximation of the cube root of  $x$ , then a better approximation is given by the value:

$$\frac{x/y^2 + 2y}{3}$$

Use this formula to implement a function called `cbt` that computes the cube-root of a given number, analogous to the `sqrt` function we did in class.

In both problems, show that your function works by calling it from `main()` and outputting some results.