This assignment allows you to practice passing pointers to function into another function. Write a complete program to do the following:

1. Assume there is a function declared as (1) `double power(double, int)` that calculates $x^n$ if we call `power(x, n)`, a function declared as (2) `double multiply(double, int)` that calculates $x*n$ if we call `multiply(x, n)`, and a function declared as (3) `double divide(double, int)` that calculates $x/n$ if we call `divide(x, n)`, where $x$ must be double and $n$ be integer.

2. Write a function `double powerpower(…)` that can compute $(x^n)^m$, $(x*n)^m$, $(x/n)^m$, where `powerpower()` must use four parameters: a pointer to function, one double and two integers.

3. Also remember to write functions `divide()`, `multiply()` and `power()`

4. Use typedef to define a new type `F` which is a pointer to function

5. When executing your program, you can choose the values for $x$, $n$, and $m$ by using argc and argv.

6. Write the documentation