IN3043 Functional Programming
Exercises 1

Remember that definitions can't be typed into the interpreter; they must be placed in a text file (a Haskell module). You'll find it easiest to have the editor going in one window and GHCi in another. Whenever you save a change in the editor, type "`:r`" in the GHCi window.

Edit the file `FirstScript.hs` to add definitions of functions to do the following: from integers to integers, using the existing functions `square` and `double`, to do the following:

1. (using the existing functions `square` and `double`) a function that squares its input and returns the double of that. Your solution should include a declaration of the type of the function.

2. a function that computes the the square of the square of its input (the fourth power).

3. a function that computes the factorial of its input.

4. Define a function with signature

   ```
   norm :: Double -> Double -> Double
   ```

   that computes the function $norm\ x\ y = \sqrt{x^2 + y^2}$. (Don't use the `square` function in this part.)