

BEE 4750/5750 Homework 0

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Problem 1

Problem 1.1

```
julia> function square_number(x)
        output = x^2
        return output
    end
square_number (generic function with 1 method)
```

Problem 1.2

If $x = 5$, then $x^2 = 25$.

Problem 1.3

```
julia> x = LinRange(-10, 10, 100)
100-element LinRange{Float64}:
 -10.0, -9.79798, -9.59596, -9.39394, ..., 9.19192, 9.39394, 9.59596, 9.79798, 10.0

julia> y = square_number(x)
Error: MethodError: no method matching ^(::LinRange{Float64}, ::Int64)
Closest candidates are:
  ^(!Matched::Union{AbstractChar, AbstractString}, ::Integer) at strings/basic.jl:718
  ^(!Matched::Complex{var"#s77"} where var"#s77"<:AbstractFloat, ::Integer) at complex
  ^(!Matched::Complex{var"#s77"} where var"#s77"<:Integer, ::Integer) at complex.jl:82
  ...

julia> plot(x, y, xlabel="x", ylabel="y = x^2", legend=false)
Error: UndefVarError: plot not defined
```

Problem 2

Problem 2.1

Problem 2.2

Problem 3

Problem 3.1

Problem 3.2

Problem 3.3

Problem 3.4

Problem 4

Problem 4.1

Problem 4.2

Problem 4.3

References