1. The result

   ```
   (4875, 5535)
   ```

   is printed from the following code.

   ```
   1   # Run this to install the packages: `import Pkg; Pkg.add("Distributions")`
   2   using Random, Distributions
   3
   4   Random.seed!(2);
   5   z = Normal(0, 1);
   6   x = rand(z, 10);
   7   n = length(x);
   8   a = round(Int64, sum(exp.(x.^3))) * sum(1:n) + round(Int64, sum(abs.(x).^(2.383))^pi*pi);
   9   b = round(Int64, sum(exp.(x.^4))) - sum(1:5n) - round(Int64, sum(abs.(x))/3);
   10  res = (a,b)
   ```

2. The correlation coefficient between x and y is $r = -0.00051$, but the scatter plot looks like this:
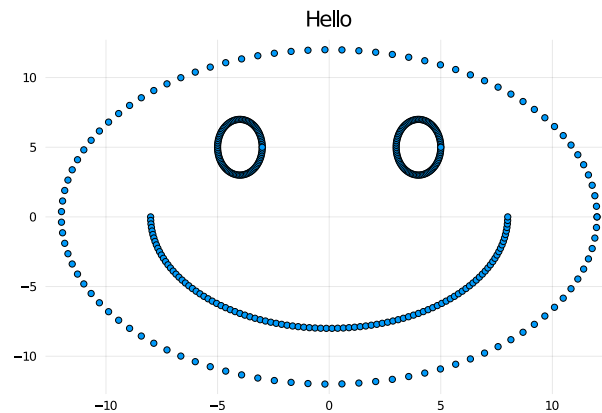
   The computation is performed using the following code

   ```
   1   using DelimitedFiles, Statistics
   2   # You need to make sure the data file is in the working directory
   3   # With Linux and Mac, it is like: cd("/home/homework/hw01/")
   4   # With Windows, it is like: cd("C:\\homework\\hw01")
   5   dat = readdlm("hw01.csv", ',', Any, '\n')
   6   x = dat[:,1]
   7   y = dat[:,2]
   8   corr = round(cor(x, y), digits=5)
   9   using Plots
   10  p = plot(x, y, seriestype=:scatter, axis=false, legend=false, title="Hello")
   11  savefig(p, "face.pdf")
   ```