HW 1

```
library(ggplot2)
```

Task: find the area of a figure bounded by curves given by the equation:

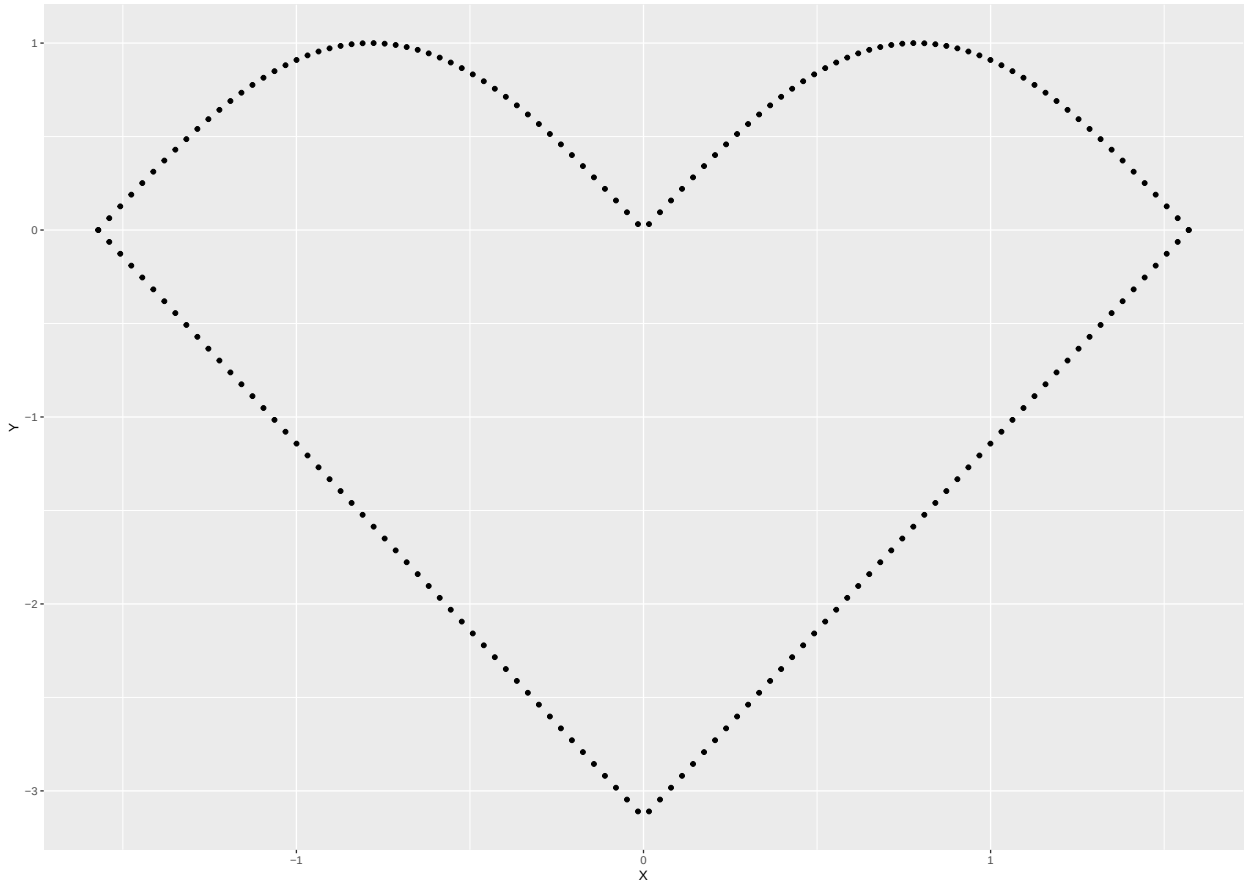
$$y = 2|x| - \pi, x \in [-\frac{pi}{2}, \frac{pi}{2}]$$
$$y = |sin(2x)|, x \in [-\frac{pi}{2}, \frac{pi}{2}]$$

using the Monte Carlo method.

You can read about this method in any resource.

For examplle: link

This is a graphical representation of the equations:



To generate random dots you may use **runif** function,

Use help function "?runif" to understand how it works.