

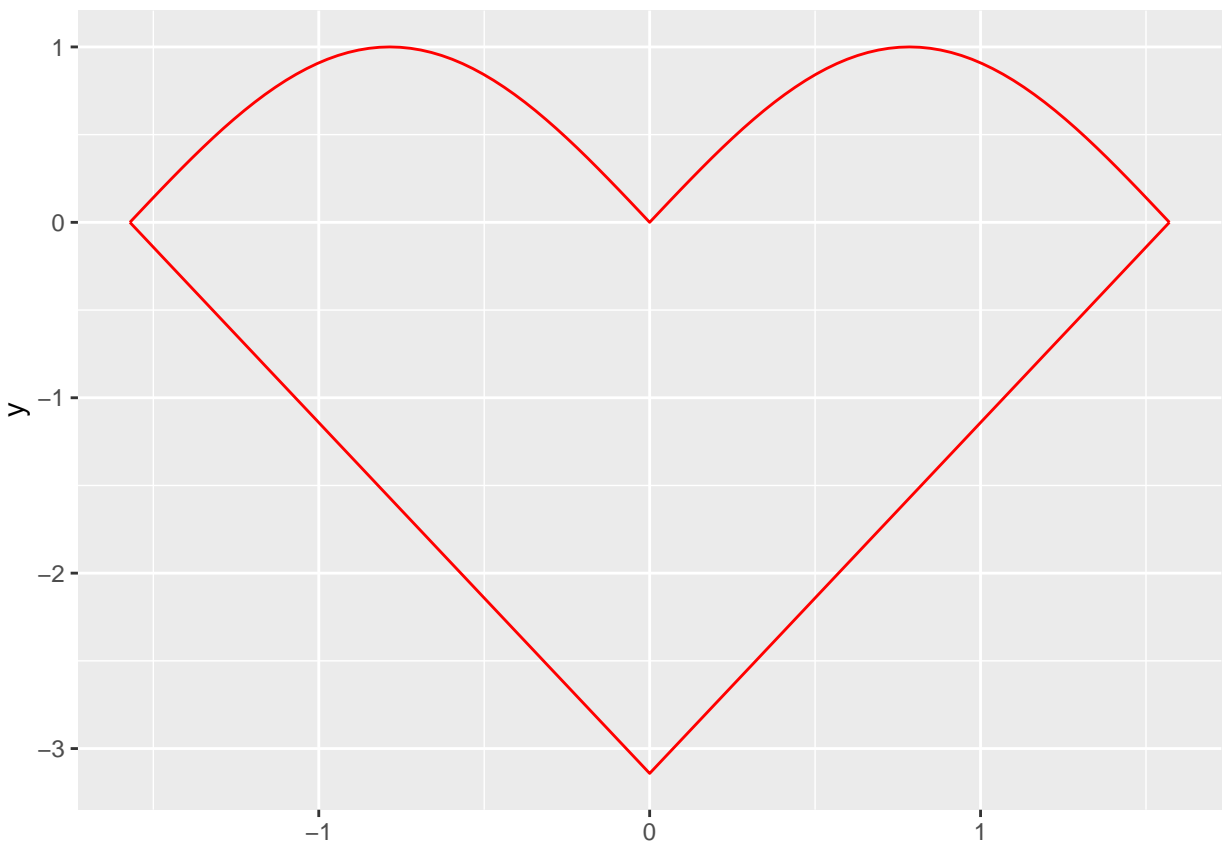
rcoure

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```
library(ggplot2)
```

```
function1 <- function(x){  
  2*abs(x)-pi  
}  
function2 <- function(x){  
  abs(sin(2*x))  
}  
  
ggplot() +  
  xlim(c(-pi/2, pi/2)) +  
  geom_function(fun = function1, colour= "red")+  
  geom_function(fun = function2, colour = "red")
```



```
point <- runif(1e6, min = -pi/2, max = pi/2)
count = 0
square = pi*pi
for (i in 1:1e6){
  if (point[i] > function1(point[i]) && point[i] < function2(point[i])){
    count <- count+1
  }
}

count*square/1e6
```

```
## [1] 6.27774
```