Homework 0

Richa Jain

```
quadratic_formula <- function(a, b, c){
    discriminant = b^2 - 4*a*c

    if(discriminant < 0){
      print("No Real Solution")
    }

    else if(discriminant > 0){
      sol1 <- (-b + sqrt(b^2 - 4*a*c))/(2*a)
      sol2 <- (-b - sqrt(b^2 - 4*a*c))/(2*a)
      cat("(", sol1, ", ", sol2, ")", "\n")
    }
}
```

Exercise 1

This provides a solution to the quadratic formula for a=1, b=3, and c=2

```
a <- 1
b <- 3
c <- 2

quadratic_formula(a, b, c)
```

```
( -1 ,  -2 )
```

Exercise 2

This provides a graph of f(x) versus x for

$$x\epsilon(-5, 5)$$

```
x <- seq(-5, 5, length=300)
plot(x, a*x^2 + b*x + c, type = "l")
abline(h=0, lty = 2)
```