BIOSTAT620 Pset 1

Your Name

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```
# Define coefficients of the quadratic equation
a <- 1
b <- -1
c <- -2

# Calculate the discriminant
discriminant <- b^2 - 4 * a * c

# Solve the equation based on the discriminant
if (discriminant < 0) {
    solutions <- "no real solutions" # If discriminant < 0, no real solutions
} else {
    solutions <- c(
        (-b + sqrt(discriminant)) / (2 * a), # First solution
        (-b - sqrt(discriminant)) / (2 * a)  # Second solution
    )
}

# Print the solutions
print(solutions)
```

```
[1]  2 -1
```

```
# Generate a sequence of x values
x <- seq(-5, 5, length = 100)

# Define the function y = x^2 - x - 2
y <- x^2 - x - 2

# Plot the function
```

```r
plot(x, y, type = "l", main = "Graph of y = x^2 - x - 2", xlab = "x", ylab = "y")

# Add the x-axis (y = 0)
abline(h = 0, col = "red")
```