

Module6Assignment.R

owenkraker

2025-02-18

```
# Question 1
A <- matrix(c(2, 0, 1, 3), ncol = 2)
B <- matrix(c(5, 2, 4, -1), ncol = 2)
A_plus_B <- A + B
A_minus_B <- A - B
A_plus_B
```

```
##      [,1] [,2]
## [1,]    7    5
## [2,]    2    2
```

```
A_minus_B
```

```
##      [,1] [,2]
## [1,]   -3   -3
## [2,]   -2    4
```

```
# Question 2
diag_matrix <- diag(c(4,1,2,3))
diag_matrix
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    4    0    0    0
## [2,]    0    1    0    0
## [3,]    0    0    2    0
## [4,]    0    0    0    3
```

```
# Question 3
M <- diag(3, 5)
M[1, 2:5] <- 1
M[2:5, 1] <- 2
M
```

```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]    3    1    1    1    1
## [2,]    2    3    0    0    0
## [3,]    2    0    3    0    0
## [4,]    2    0    0    3    0
## [5,]    2    0    0    0    3
```