



Actividad | #1 | Nombre de la actividad Matrices

Nombre del curso

Ingeniería en Desarrollo de Software



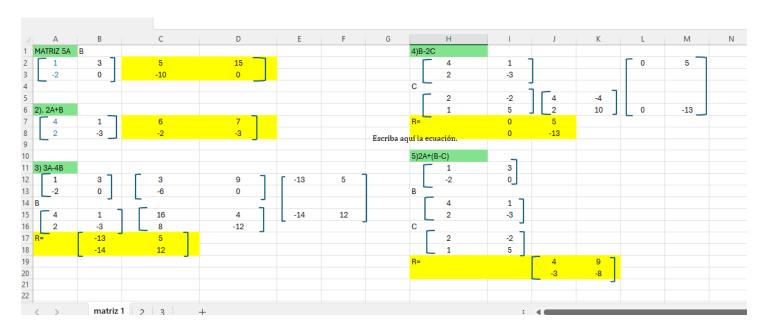
TUTOR: Eduardo Israel Castillo García

ALUMNO: Mónica Lázaro Méndez

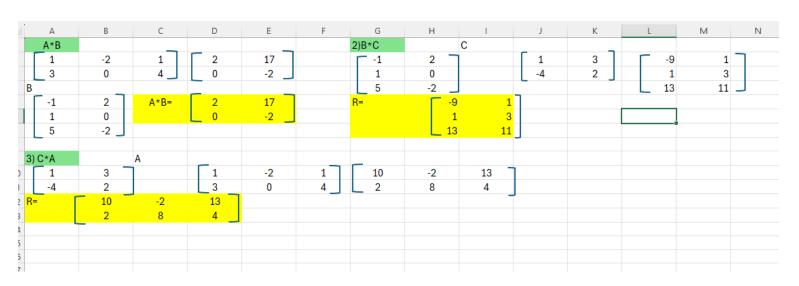
FECHA:11/10/2025

DESARROLLO

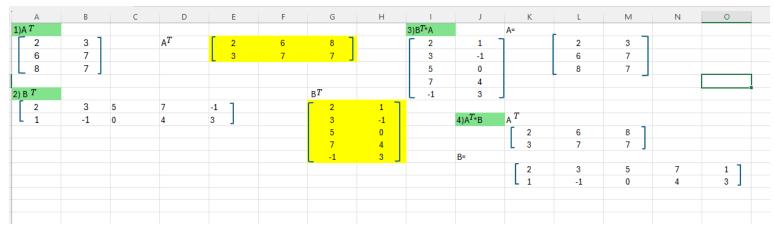
Matriz 1

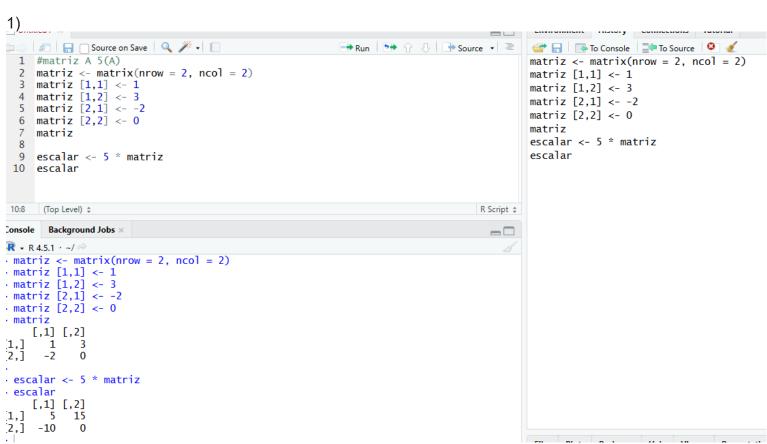


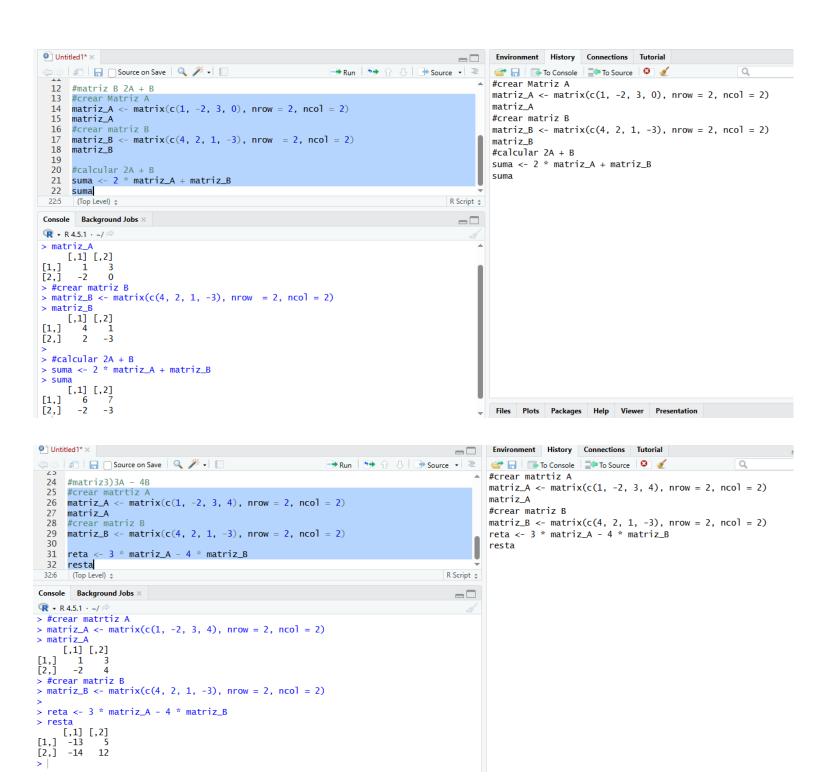
Matriz 2



Matriz 3







```
Untitled1* ×
                                                                                             Environment History Connections Tutorial
                                                                                     Run 5 1 5 Source =
                                                                                            To Console To Source 3
                                                                                            #crear matriz B
      #crear matriz B
                                                                                            matriz_B \leftarrow matrix(c(4, 1, 2, -3), nrow = 2, ncol = 2)
      matriz_B <- matrix(c(4, 1, 2, -3), nrow = 2, ncol = 2)
                                                                                            matriz
      matriz
                                                                                            #crear matriz c
      #crear matriz c
                                                                                            matriz_C \leftarrow matrix(c(2, -2, 1, 5), nrow = 2, ncol = 2)
   6
      matriz_C \leftarrow matrix(c(2, -2, 1, 5), nrow = 2, ncol = 2)
                                                                                            matriz
      matriz
                                                                                            resta <- matriz_B - 2 * matriz_C
   8
      resta <- matriz_B - 2 * matriz_C
                                                                                            resta
      (Top Level) $
                                                                                   R Script ¢
Console Background Jobs ×
R + R 4.5.1 · ~/
> #crear matrız B
> matriz_B < - matrix(c(4, 1, 2, -3), nrow = 2, ncol = 2)
> matriz
     [,1] [,2]
[1,] 4 1
[2,] 2 -3
> #crear matriz c
> matriz_C <- matrix(c(2, -2, 1, 5), nrow = 2, ncol = 2)
> matriz
    [,1] [,2]
[1,]
        2 -3
[2,]
> resta <- matriz_B - 2 * matriz_C</pre>
> resta
    [,1] [,2]
        5 -13
[2,]
                                                                                             Files Plots Packages Help Viewer Presentation
Untitled1* ×
                                                                                   Environment History Connections Tutorial
1 #matriz5) 2A + (B - C)
                                                                                           Run Source - =
                                                                                          #Crear matriz A
     #Crear matriz A
                                                                                          matriz_A <- matrix(c(1, -2, 3, 0), nrow = 2, ncol = 2)
      matriz_A \leftarrow matrix(c(1, -2, 3, 0), nrow = 2, ncol = 2)
                                                                                           matriz_A
      matriz_A
                                                                                           #crear matriz B
      #crear matriz B
                                                                                          matriz_B <- matrix(c(4, 2, 1, -3), nrow = 2, ncol = 2)
      matriz_B <- matrix(c(4, 2, 1, -3), nrow = 2, ncol = 2)
  6
                                                                                           matriz B
      matriz_B
                                                                                           #crear matriz C
      #crear matriz C
                                                                                           matriz_C \leftarrow matrix(c(2, 1, -2, 5), nrow = 2, ncol = 2)
      matriz_C \leftarrow matrix(c(2, 1, -2, 5), nrow = 2, ncol = 2)
                                                                                          matriz_C
      (Top Level) $
                                                                                  R Script $
                                                                                          #realiza la operacion 2A + (B - C)
                                                                                          #multipolicacion por escalar (2 * matriz_A)
Console Background Jobs ×
                                                                                          #la suma y resta de matrices tambien se realiza por elemento
R → R 4.5.1 ·
    [,1] [,2]
                                                                                           resultado <- 2 * matriz_A + (matriz_B - matriz_C)
[1,]
    4 1 2 -3
                                                                                           resultado
> #crear matriz C
> matriz_C < - matrix(c(2, 1, -2, 5), nrow = 2, ncol = 2)
> matriz_C
    [,1] [,2]
[2,]
        1
> #realiza la operacion 2A + (B - C)
> #multipolicacion por escalar (2 * matriz_A)
> #la suma y resta de matrices tambien se realiza por elemento
> resultado <- 2 * matriz_A + (matriz_B - matriz_C)
> resultado
   [,1] [,2]
```

20

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[1,] 4

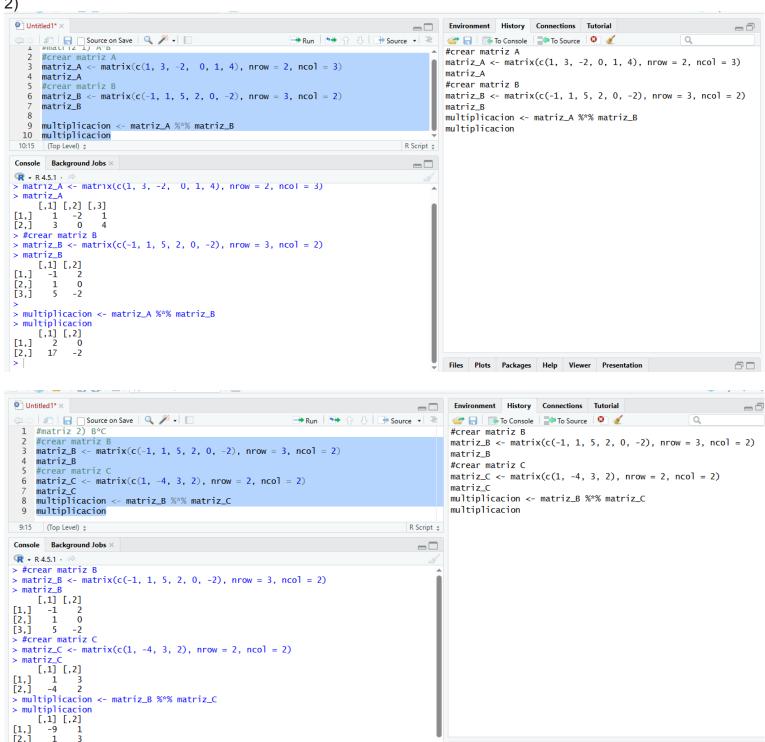
Γ2.1

9 -3 -8 2)

11

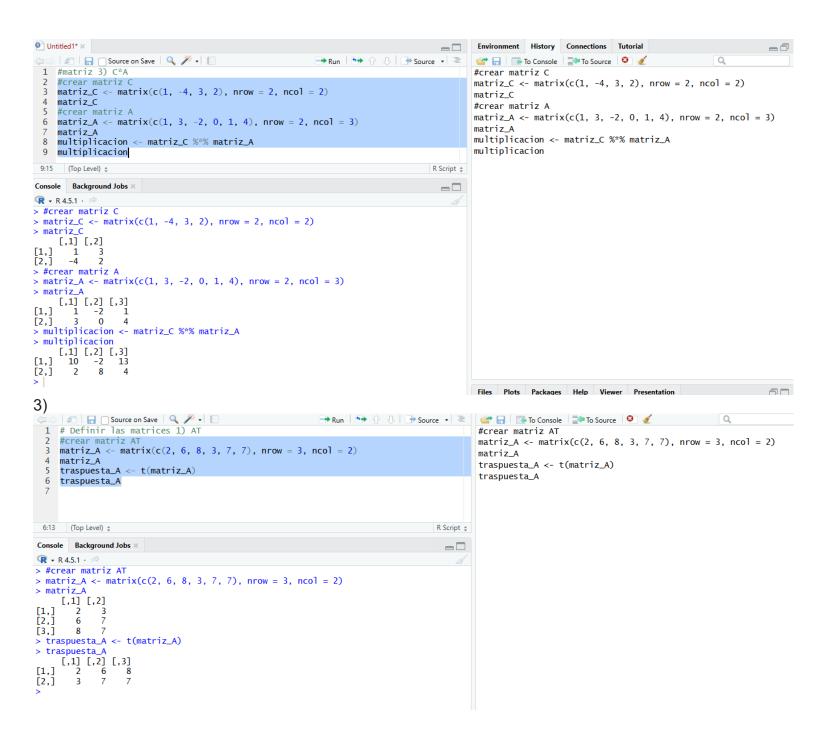
13

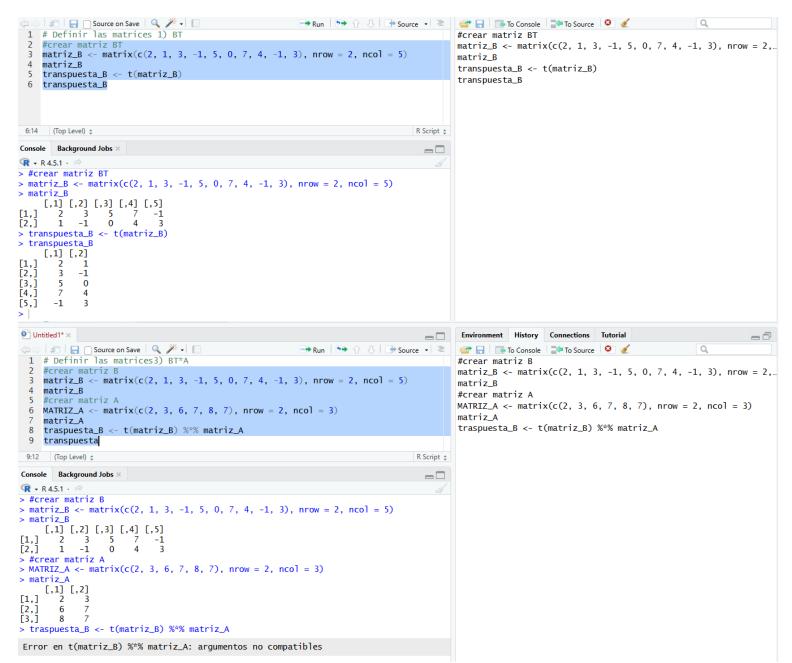
Г3.1



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ar





Las dimenciones no compatibles para la multiplicación (2 x 5 * 3 x 2)

```
1 # Definir las matrices4)AT * B
                                                                                             #crear matriz AT
      #crear matriz AT
                                                                                             MATRIZ_A <- matrix(c(2, 6, 8, 3, 7, 7), nrow = 3, ncol = 2)
      MATRIZ_A \leftarrow matrix(c(2, 6, 8, 3, 7, 7), nrow = 3, ncol = 2)
                                                                                             matriz A
      matriz_A
                                                                                             #crear matriz B
      #crear matriz B
                                                                                             matriz_B \leftarrow matrix(c(2, 1, 3, -1, 5, 0, 7, 4, -1, 3), nrow = 2,...
      matriz_B <- matrix(c(2, 1, 3, -1, 5, 0, 7, 4, -1, 3), nrow = 2, ncol = 5)
                                                                                             matriz_B
      matriz_B
                                                                                             #tranpuesta AT
      #tranpuesta AT
 9 traspuesta <- t(matiz_A) %*% matriz_B traspuesta 4 (Top Level) $
                                                                                             traspuesta <- t(matiz_A) %*% matriz_B
                                                                                    R Script $
Console Background Jobs ×
                                                                                      R → R 4.5.1 ·
> MATRIZ_A <- matrix(c(2, 6, 8, 3, 7, 7), nrow = 3, ncol = 2)
> matriz_A
     [,1] [,2]
[1,]
[2,]
       8
[3,]
> #crear matriz B
> matriz_B <- matrix(c(2, 1, 3, -1, 5, 0, 7, 4, -1, 3), nrow = 2, ncol = 5)
     [,1] [,2] [,3] [,4] [,5]
[1,]
[2,]
     2 3
1 -1
                   0
> #tranpuesta AT
> traspuesta <- t(matiz_A) %*% matriz_B
Error: objeto 'matiz_A' no encontrado
```

Las dimenciones no coinciden, no se me acomodo como en el exel la matriz A.