

Sejam três matrizes A (NxL), B (LxM), e C (NxM). Sendo C a matriz resultante de AxB.
Vale salientar que $C[i][j] = \text{Somatória de } (A[i][k] * B[k][j])$ onde k varia de 0 até L – 1.

```
for (int i = 0; i < N; i++) {
    for (int j = 0; j < M; j++) {
        C[i][j] = 0;
        for (int k = 0; k < L; k++) {
            C[i][j] += A[i][k] * B[k][j];
        }
    }
}
```

Exemplos:

A (2x2) B(2x1) C(2x1)

A = $\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix}$ B = $\begin{vmatrix} 1 \\ 2 \end{vmatrix}$

C = $\begin{vmatrix} 5 \\ 11 \end{vmatrix}$

i	j	k	C[i,j]		
0	0	0	C[0][0]	$A[0][0] * B[0][0]$	$1 * 1 = 1$
0	0	1	C[0][0]	$A[0][0] * B[0][0] + A[0][1] * B[1][0]$	$1 * 1 + 2 * 2 = 5$
1	0	0	C[1][0]	$A[1][0] * B[0][0]$	$3 * 1 = 3$
1	0	1	C[1][0]	$A[1][1] * B[1][0]$	$3 * 1 + 4 * 2 = 11$

A (2x2) B(2x2) C(2x2)

A = $\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix}$ B = $\begin{vmatrix} 1 & 2 \\ 3 & 4 \end{vmatrix}$

C = $\begin{vmatrix} 7 & 10 \\ 15 & 22 \end{vmatrix}$

i	j	k	C[i,j]		
0	0	0	C[0][0]	$A[0][0] * B[0][0]$	$1 * 1 = 1$
0	0	1	C[0][0]	$A[0][0] * B[0][0] + A[0][1] * B[1][0]$	$1 * 1 + 2 * 3 = 7$
0	1	0	C[0][1]	$A[0][0] * B[0][1]$	$1 * 2 = 2$
0	1	1	C[0][1]	$A[0][0] * B[0][1] + A[0][1] * B[1][1]$	$1 * 2 + 2 * 4 = 10$
1	0	0	C[1][0]	$A[1][0] * B[0][0]$	$3 * 1 = 3$
1	0	0	C[1][0]	$A[1][0] * B[0][0] + A[1][1] * B[1][0]$	$3 * 1 + 4 * 3 = 15$
1	1	0	C[1][1]	$A[1][0] * B[0][1]$	$3 * 2 = 6$
1	1	1	C[1][1]	$A[1][0] * B[0][1] + A[1][1] * B[1][1]$	$3 * 2 + 4 * 4 = 22$