

```

1  from program2_2 import Dmatrix
2
3  L = 3
4  M = 2
5  N = 3
6
7  def main():
8      global L, M, N
9
10     a = Dmatrix(1, L, 1, M) # 行列 a[1...L][1...M]
11     b = Dmatrix(1, M, 1, N) # 行列 b[1...M][1...N]
12
13     # 行列 A の定義
14     for i in range(1, L+1):
15         for j in range(1, M+1):
16             a[i][j] = 2.0 * (i + j)
17
18     # 行列 B の定義
19     for i in range(1, M+1):
20         for j in range(1, N+1):
21             b[i][j] = 2.0 * (i + j)
22
23     # 行列の積の計算
24     c = matrix_product(a, b)
25     # 結果の表示
26     print("A x B の結果は次の通りです")
27     for i in range(1, L+1):
28         for j in range(1, N+1):
29             print(c[i][j], end=" ")
30         print()
31
32
33     def matrix_product(a: Dmatrix, b: Dmatrix) -> Dmatrix:
34         l1, l2 = a.row_head_idx, a.row_last_idx
35         m1, m2 = a.col_head_idx, a.col_last_idx
36         n1, n2 = b.col_head_idx, b.col_last_idx
37         c = Dmatrix(l1, l2, n1, n2)
38
39         for i in range(l1, l2+1):          # 行の添字
40             for j in range(n1, n2+1):
41                 c[i][j] = 0.0              # 変数の初期化
42                 for k in range(m1, m2+1):  # 列の添字
43                     c[i][j] += a[i][k] * b[k][j]

```