$$\mathbf{C} = \mathbf{A} \cdot \mathbf{B} = \begin{pmatrix} 1 & 2 & 3 \\ 2 & 3 & 4 \end{pmatrix} \cdot \begin{pmatrix} 5 & 6 & 7 & 8 \\ 6 & 7 & 8 & 9 \\ 7 & 8 & 9 & 10 \end{pmatrix} = \begin{pmatrix} 38 & 44 & 50 & 56 \\ 56 & 65 & 74 & 83 \end{pmatrix}$$

Компоненты матрицы C вычисляются следующим образом:

$c_{11} = a_{11} \cdot b_{11} + a_{12} \cdot b_{21} + a_{13} \cdot b_{31} = 1 \cdot 5 + 2 \cdot 6 + 3 \cdot 7 = 5 + 12 + 21 = 38$

$c_{12} = a_{11} \cdot b_{12} + a_{12} \cdot b_{22} + a_{13} \cdot b_{32} = 1 \cdot 6 + 2 \cdot 7 + 3 \cdot 8 = 6 + 14 + 24 = 44$

$c_{13} = a_{11} \cdot b_{13} + a_{12} \cdot b_{23} + a_{13} \cdot b_{33} = 1 \cdot 7 + 2 \cdot 8 + 3 \cdot 9 = 7 + 16 + 27 = 50$

$c_{14} = a_{11} \cdot b_{14} + a_{12} \cdot b_{24} + a_{13} \cdot b_{34} = 1 \cdot 8 + 2 \cdot 9 + 3 \cdot 10 = 8 + 18 + 30 = 56$

$c_{21} = a_{21} \cdot b_{11} + a_{22} \cdot b_{21} + a_{23} \cdot b_{31} = 2 \cdot 5 + 3 \cdot 6 + 4 \cdot 7 = 10 + 18 + 28 = 56$

$c_{22} = a_{21} \cdot b_{12} + a_{22} \cdot b_{22} + a_{23} \cdot b_{32} = 2 \cdot 6 + 3 \cdot 7 + 4 \cdot 8 = 12 + 21 + 32 = 65$

$c_{23} = a_{21} \cdot b_{13} + a_{22} \cdot b_{23} + a_{23} \cdot b_{33} = 2 \cdot 7 + 3 \cdot 8 + 4 \cdot 9 = 14 + 24 + 36 = 74$

$c_{24} = a_{21} \cdot b_{14} + a_{22} \cdot b_{24} + a_{23} \cdot b_{34} = 2 \cdot 8 + 3 \cdot 9 + 4 \cdot 10 = 16 + 27 + 40 = 83$