$$\begin{pmatrix}
a_{1,1} & \dots & b_{1,k} \\
b_{n,1} & \dots & b_{n,k}
\end{pmatrix} \begin{cases}
n \text{ rows} \\
b_{n,1} & \dots & b_{n,k}
\end{cases}$$

$$\begin{pmatrix}
a_{1,1} & \dots & a_{1,n} \\
\vdots & \ddots & \vdots \\
a_{m,1} & \dots & a_{m,n}
\end{pmatrix} \begin{pmatrix}
c_{1,1} & \dots & c_{1,n} \\
\vdots & \ddots & \vdots \\
c_{m,1} & \dots & c_{m,n}
\end{pmatrix} \end{cases} m \text{ rows}$$

$$\begin{pmatrix}
a_{1,1} & \dots & a_{1,n} \\
\vdots & \ddots & \vdots \\
c_{m,1} & \dots & c_{m,n}
\end{pmatrix} k \text{ columns}$$