

$$\begin{array}{c}
 (1, 2, \dots, n, n+1, n+2, \dots, n+m) \\
 \downarrow \\
 (\sigma(\textcolor{red}{1}), \sigma(\textcolor{red}{2}), \dots, \sigma(\textcolor{red}{n}), n + \tau(\textcolor{blue}{1}), n + \tau(\textcolor{blue}{2}), \dots, n + \tau(\textcolor{blue}{m}))
 \end{array}$$