Let $\alpha = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 \\ 2 & 1 & 5 & 3 & 4 \end{bmatrix}$ and $\beta = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 \\ 5 & 4 & 3 & 1 & 2 \end{bmatrix}$.

1. Rewrite α and β as products of disjoint cycles.
2. Calculate $\alpha\beta$ and $\beta\alpha$.
3. Calculate $|\beta|$,$|\alpha\beta|$, α.

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