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Quiz #8
Mathematics 309a Abstract Algebra
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Suppose $\sigma = \begin{pmatrix} 123456789 \\ 257816394 \end{pmatrix}$, a permutation in S_9 .

A. Express σ as a product of disjoint cycles.

B. Express σ as a product of transpositions.

C. Is σ even or odd?

D. How many elements are in $\langle \sigma \rangle$, the cyclic subgroup of S_9 generated by σ ?