Again, these are two possibilities:

1. Change in a nonbasic column \( a_j \) of \( A \) (Change in \( A_n \))

In this case, primal feasibility is not affected. Dual solution \( y \) remains unchanged.

The only changes are in the \( j \)th component of \( \mathbf{s}_j \):

\[ s_j = (c_j - a_j^T \mathbf{y}) \]

If \( s_j \leq 0 \) we are still optimal.

Else we can reoptimize using the primal simplex method.

2. Changes in a basic column \( a_j \) of \( A \).

This is the most difficult case, since it affects both primal and dual feasibility.

Since \( \mathbf{x}_B = \mathbf{A}_B^{-1} \mathbf{b} \) \( \mathbf{x}_B \) changes.

Also since \( \mathbf{A}_B \mathbf{y} = \mathbf{c}_B \) \( \mathbf{y} \) changes.