

Step-1

We have to explain that why A , and $-A$ have the same reduced echelon form R .

If we multiply all rows of A with -1 then we have $-A$.

And if we multiply all rows of $-A$ with -1 then we have A .

Step-2

Therefore by elementary row operation (not interchanging the rows) convert A to $-A$ and $-A$ to A .

Therefore the reduced echelon form for A and $-A$ is R .