

Step-1

By the properties of determinants, we know that multiplying a row with 3 of a matrix lead to the determinant is increased by 3 times.

So, $\det B = 3 \det A$

Also, by the properties of determinants we have that subtracting a row from another row does not change the determinant.

So, $\det B = \det C$.

Therefore, the determinant of the resultant matrix C is three times the determinant of the given matrix A .