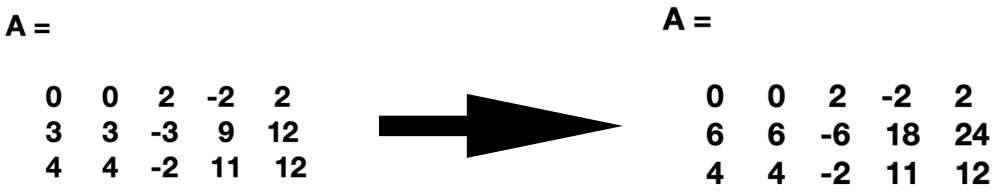
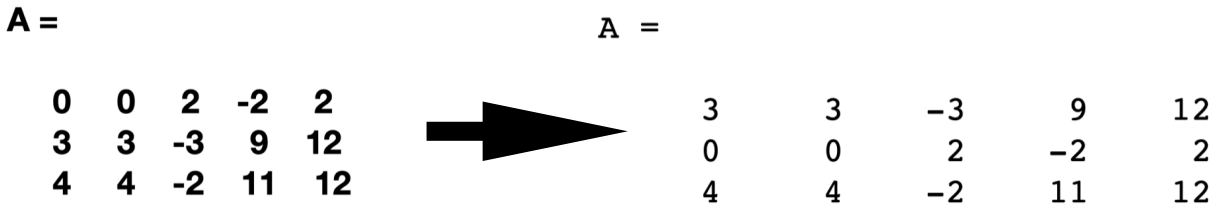
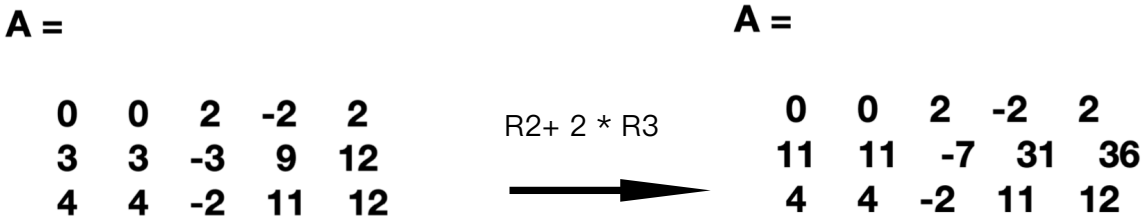
1. Write a matlab function to implement the first type of row operation, row_op1(A, i, s), where the operation multiplies the ith row of matrix A by a scalar s.
2. Apply row_op1 to calculate the result of multiplying the second row of A by 2



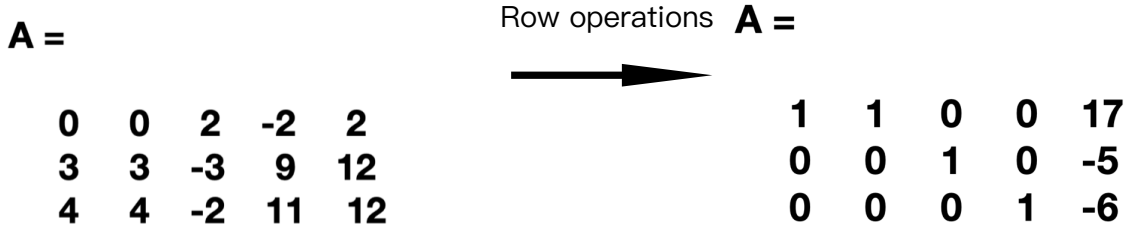
3. Write a matlab function to implement the second type of row operation, row_op2(A, i, j), where the operation swaps the ith row and the jth row of matrix A.
4. Apply row_op2 to swap the first and second rows of matrix A.



5. Write a matlab function to implement the type III row operation, row_op3(A, i, j, s), where the operation returns a matrix that is a result of adding s times row j to row i.
6. Apply row_op3 to add 2 times row 3 to row 2 of matrix A.



7. Write a script to perform row operations that translate matrix A to its reduced echelon form.



8. Write a Matlab function to implement the algorithm my_rref for determining the reduced echelon form of a matrix.

```
function B=my_rref(A)
B=A;
[M N]=size(B);
pivot_col = 0;
for i = 1:M
    for j=pivot_col+1:N
     find the first non-zero element of col j from row i to row M
     if such element exist
          use it to create a leading 1 for row i
          eliminate other elements in column j
          pivot_col=j;
          break
     end
    end
end
```

Exercise 8
Write a Matlab function to implement my_rref

9. Apply the Matlab function my_rref to translate the following matrix to a reduced echelon form.

A =

0	0	2	-2	2
3	3	-3	9	12
4	4	-2	11	12

my_rref →

A =

1	1	0	0	17
0	0	1	0	-5
0	0	0	1	-6

10. Apply the Matlab function my_rref to invert the following matrix.

$$A = \begin{bmatrix} 1 & -1 & -2 \\ 2 & -3 & -5 \\ -1 & 3 & 5 \end{bmatrix}$$