Matlab -- Task

a) Magic matrix has the equal element sum

- for every row
- for every column
- for the main diagonal
- for the antidiagonal

To create a magic matrix in Matlab use **magic**, e.g.

```
magic(3)
ans =
     8     1     6
     3     5     7
     4     9     2
```

In task a), however, you are asked to create not a matrix, but a function:

```
w = ismagic(A)
```

returning **true** or **false**, answering whether given matrix is a magic matrix *(you are not required to check whether the matrix is square – it will always be)*. The solution should be in ismagic.m file, additional files are optional.

b) The second task is to write a function

```
w = isrcneg(A)
```

returning **true** or **false**, depending on whether given matrix has at least one negative element in each row and column (the matrix does not have to be a square matrix). Compare with this example:

```
A = [2 -1 3 1; 0 4 -3 -2; -2 -1 3 -3]
A =
     2    -1     3     1
     0     4    -3    -2
    -2    -1     3    -3
w = isrcneg(A)
w =
  logical
   1
A(2,3) = 0
A =
     2    -1     3     1
     0     4     0    -2
    -2    -1     3    -3
w = isrcneg(A)
w =
  logical
   0
```

The solutions should work for the matrices of size up to 10000x10000.