Gershgorin disks

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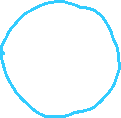
Eigenvalue estimation

Eigenvalue middle point: diagonal elements

Middle point radius: row elements absolute sum ( )except diagonal elements)

## Exercise 1

Middle points:



A is regular, eigenvalues will be positive numbers ()

## Exercise 2

Prove that A is regular (submatrix determinants are non-zero or eigenvalues are non-zero).

Cannot decide because can be zero.

Do slightly changed matrix:

now always <0, => is regular.