Gershgorin disks

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## Exercise 1

Prove that A is a positive definite matrix.

Positive definite if:

* A eigenvalues are positive
* or determinant of submatrices (principal minors) are positives

We estimate eigenvalues because it cheaper to calculate.

Middle points:

### Conclusion

self adjoint matrix -> real numbers

Gershgorin disks non negative interval -> Eigenvalues will be positive numbers () -> A is regular

# Gershgorin disks similarity

are similar if there exist a regular matrix C

Proposition: Similar matrices have the same eigenvalues.