

- sharper version, 626
- Cauchy determinant, 359
- Cauchy sequence, 1374, 1375, 1383, 1386, 1646
  - normed vector space, 362
- Cauchy–Schwarz inequality, 332, 333, 443, 521
- Cayley, 936
- Cayley’s formula, 941, 949
- Cayley–Hamilton theorem, 231, 234
- center, 947
- center of gravity, 771
- center of mass, 806
- centered data point, 770
- central dilatation, 792
  - definition, 826
- central projection, 856, 858
- centroid, 771, 780, 782
- chain, *see* graph path
- chain rule, 1417
- change
  - of basis, 795
  - of frame, 795
- change of basis matrix, 125, 127
- characteristic function, 1820
- characteristic polynomial, 230, 339, 557
- characteristic value, *see* eigenvalue
- characteristic vector, *see* eigenvector
- Chasles, 936, 973
- Chasles’s identity, 802
- Chebyshev polynomials, 464
- Cholesky factorization, 282, 283
- circle, 855, 941
- circular points, 878, 938
  - definition, 939
- closed
  - region, 1343
- closed half-space, 1474
- closed under
  - affine combinations, 807
  - linear combinations, 807
- closed unit ball, 864
- closure, 1347
- closure of a set, 1648
- codimension one, 812
- coercive, 1671
  - bilinear form, 1679
- cofactor, 217
- collinear
  - points, 812
- collineation, 887
- column vector, 50, 85, 406
- column vectors, 799
- commuting family
  - linear maps, 1094
- compact
  - definition, 1353
  - locally, 1360
  - neighborhood, 1358, 1360
  - relatively, 1353
  - sets, 1352–1368
- complementary slackness conditions, 1745, 1838
- complete normed vector space, *see* Banach space
- complete quadrilaterals, 916
- complex
  - logarithm, 941
- complex number
  - conjugate, 515
  - imaginary part, 515
  - modulus, 515
  - real part, 515
- complexification
  - of  $\mathbf{P}(E)$ , 937
  - of a linear map, definition, 937
  - of a vector space, 614
  - of a vector space, definition, 937
  - of an inner product, 615
- complexification of vector space, 614
- computational geometry, 478
- computer graphics, 949, 1517
- computer vision, 942, 947, 1517
- concave
  - extended real-valued function, 1822
- concave function, 1474
  - strictly concave, 1474