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coordinate systems

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Classification	msc 51-01
Related topic	StereographicProjection

Plane

1. Cartesian coordinates

2. Polar coordinates

$\mathbb{R}^3$

1. `http://planetmath.org/CartesianCoordinates`Cartesian coordinates

2. Spherical coordinates

3. Cylindrical coordinates

Sphere S^2

1. Stereographic projection

2. Mercator projection

3. ..

Miscellaneous

1. Barycentric coordinates

2. Homogeneous coordinates (x, y, t) in plane, (x, y, z, t) in $\mathbb{R}^3$

Differential geometry

1. `http://planetmath.org/RiemannNormalCoordinates`Normal coordinates in Riemann geometry

2. `http://planetmath.org/DarbouxsTheoremSymplecticGeometry`Darboux coordinates in symplectic geometry

3. Gaussian coordinates

4. Fermi coordinates for a submanifold

5. Boundary coordinates

Coordinate transformations

1. `http://planetmath.org/AffineTransformation`affine transformations

2. `http://planetmath.org/HomotopyOfPaths`continuous transformations in algebraic topology (homotopy theory)

3. Lorentz group transformations

4. Cartesian-to-polar coordinate transformations

5. Cartesian-to-spherical coordinate transformations

6. A.

7. B.