Euclidean geometry of plane

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Entry type	Topic
Classification	msc 51-01
Synonym	plane geometry
Related topic	EuclideanGeometryOfTheSpace
Related topic	AnalyticGeometry

Basic objects

1. point,

2. line, ray, line segment,

3. plane,

4. angle,

5. convex angle,

6. circle,

7. tangent line,

8. secant line,

9. normal line

10. center normal

11. angle bisector

12. triangle,

13. http://planetmath.org/Congruencecongruent triangles,

14. triangle solving,

15. polygon,

16. regular polygon

Basic concepts

1. http://planetmath.org/IncidenceGeometryincidence,

2. betweenness,

3. http://planetmath.org/CongruenceAxiomscongruence,

4. similarity,

5. continuity,

6. parallelism,

7. perpendicularity,

8. corresponding angles in transversal cutting

9. intercept theorem

10. locus

11. dilation and translation,

12. rotation and reflection,

13. inversion of plane,

14. harmonic division,

15. angle of view,

16. compass and straightedge constructions

Analytic geometry

1. Cartesian coordinates,

2. polar coordinates,

3. line in plane

4. slope, slope angle, condition of orthogonality,

5. parabola,

6. `http://planetmath.org/Circle`circle,

7. ellipse,

8. hyperbola,

9. conjugate hyperbola,

10. unit hyperbola,

11. tangent of conic section,

12. hyperbolas orthogonal to ellipses

13. power of point,

14. chordal,

15. confocal,

16. transition to skew-angled coordinates,

17. conjugate diameters of ellipse,

18. perimeter of ellipse