

Help (How to Use)

- Tool Bar

• *Rectangle*

In Euclidean plane geometry, a rectangle is a quadrilateral with four right angles. It can also be defined as: an equiangular quadrilateral, since equiangular means that all of its angles are equal ($360^\circ/4 = 90^\circ$); or a parallelogram containing a right angle. A rectangle with four sides of equal length is a square. The term oblong is occasionally used to refer to a non-square rectangle. A rectangle with vertices ABCD would be denoted as Rectanglen.PNG ABCD.

The word rectangle comes from the Latin *rectangulus*, which is a combination of *rectus* (as an adjective, right, proper) and *angulus* (angle).

A crossed rectangle is a crossed (self-intersecting) quadrilateral which consists of two opposite sides of a rectangle along with the two diagonals (therefore only two sides are parallel). It is a special case of an antiparallelogram, and its angles are not right angles and not all equal, though opposite angles are equal. Other geometries, such as spherical, elliptic, and hyperbolic, have so-called rectangles with opposite sides equal in length and equal angles that are not right angles.

Rectangles are involved in many tiling problems, such as tiling the plane by rectangles or tiling a rectangle by polygons.

• *RoundRectangle*

A squircle is a shape intermediate between a square and a circle. There are at least two definitions of "squircle" in use, the most common of which is based on the superellipse. The word "squircle" is a portmanteau of the words "square" and "circle". Squircles have been applied in design and optics.

- *Oval*

An oval (from Latin ovum, "egg") is a closed curve in a plane which resembles the outline of an egg. The term is not very specific, but in some areas (projective geometry, technical drawing, etc.) it is given a more precise definition, which may include either one or two axes of symmetry of an ellipse. In common English, the term is used in a broader sense: any shape which reminds one of an egg. The three-dimensional version of an oval is called an ovoid.

- *Line*

One of the basic geometric concepts. A straight line is usually implicitly defined by the axioms of geometry; e.g., a Euclidean straight line by the axioms of incidence, order, congruence, and continuity. A straight line is called projective, affine, hyperbolic, etc., depending on the plane in which it is imbedded. A straight line can be studied by its transformations induced by the collineations of the plane. E.g., the group of algebraic automorphisms of a real projective straight line is isomorphic to the group of displacements of the Lobachevskii plane. Topologically, all straight lines in one plane are equivalent. Thus, the elliptic and real projective straight lines are topologically equivalent to a circle in the Euclidean plane, while the complex projective straight line is topologically equivalent to a two-dimensional sphere in the Euclidean space. A straight line is called continuous, discrete or finite if it is incident with a set of points of the cardinality of the continuum, with a countable set or with a finite set, respectively.

In the plane over an arbitrary algebraic field, a straight line is an algebraic curve of order one. In the rectilinear coordinate system (x,y) of the Euclidean plane R^2 , a straight line is given by an equation

$$Ax+By+C=0.$$

The coefficients A, B determine the coordinates of the normal vector of this straight line.

The straight line (A, B) in the affine space over a field k (according to Weil) is the set of points M for which $AM_{\text{vec}} = tAB_{\text{vec}}$, where $t \in k$.

- *Polygon*

In geometry, a polygon (/ˈpɒlɪɡɒn/) is a plane figure that is described by a finite number of straight line segments connected to form a closed polygonal chain (or polygonal circuit). The bounded plane region, the bounding circuit, or the two together, may be called a polygon.

The segments of a polygonal circuit are called its edges or sides. The points where two edges meet are the polygon's vertices (singular: vertex) or corners. The interior of a solid polygon is sometimes called its body. An n -gon is a polygon with n sides; for example, a triangle is a 3-gon.

A simple polygon is one which does not intersect itself. Mathematicians are often concerned only with the bounding polygonal chains of simple polygons and they often define a polygon accordingly. A polygonal boundary may be allowed to cross over itself, creating star polygons and other self-intersecting polygons.

A polygon is a 2-dimensional example of the more general polytope in any number of dimensions. There are many more generalizations of polygons defined for different purposes.

- *Pen*

In mathematics, a spline is a special function defined piecewise by polynomials. In interpolating problems, spline interpolation is often preferred to polynomial interpolation because it yields similar results, even when using low degree polynomials, while avoiding Runge's

phenomenon for higher degrees.

In the computer science subfields of computer-aided design and computer graphics, the term spline more frequently refers to a piecewise polynomial (parametric) curve. Splines are popular curves in these subfields because of the simplicity of their construction, their ease and accuracy of evaluation, and their capacity to approximate complex shapes through curve fitting and interactive curve design.

The term spline comes from the flexible spline devices used by shipbuilders and draftsmen to draw smooth shapes.

- *Text*

- * Sets this graphics context's font to the specified font.
- * All subsequent text operations using this graphics context
- * use this font. A null argument is silently ignored.
- * @param font the font.

- * Renders the text of the specified {@code String}, using the
 - * current text attribute state in the {@code Graphics2D} context.
 - * The baseline of the
 - * first character is at position (<i>x</i>, <i>y</i>) in
 - * the User Space.
 - * The rendering attributes applied include the {@code Clip},
 - * {@code Transform}, {@code Paint}, {@code Font} and
 - * {@code Composite} attributes. For characters in script
 - * systems such as Hebrew and Arabic, the glyphs can be
- rendered from
- * right to left, in which case the coordinate supplied is the
 - * location of the leftmost character on the baseline.