Attributes of a rhombus

Four-way, in which all sides have the same length for other purposes, see Rhombus (disambigation). RhombusTwo rhombiTypequadrilateral, parallelogram, kiteEdges and vertices4 Schlefli Symbol (No 22), order 4Area K q p · q 2 displaystyle Kfrac (p'cdot q'{2}) (half of the product diagonal)Dual polygonrectanglePropertiesconvex, isotopic diamond has a square as a special case, and is a special case of kite and parallel. In the plane of Euclid geometry, the rombus (multiple diamond or rombus) is four-sided, all four sides have the same length. The other name is an equilateral four-sided one, since the equilateral means that all its sides are equal in length. The diamond is often referred to as a diamond, after a diamond suit in a playing card that resembles a projection of an octageral diamond, or lollipop, although the first sometimes refers specifically to a diamond with an angle of 60 (which some authors call a calisson after the French sweet - also see Polyamond), and the latter sometimes refers specifically to the diamond with an angle of 45. Each diamond is simple (not itself intersected), and is a special case of parallelogram and kite. The right-angle rombus is a square. The etymology of the word rombus comes from the Greek ῥόμβος (rombo), which means something that rotates, which comes from the verb ῥέμβω (rembe), meaning turn around and turn around. The word was used by both Euclid and Archimedes, who used the term solid rombus for bicon, two right circular cones separating the common ground. The surface we call the diamond today is a cross-section of the beacon on the plane through the tops of the two cones. Characteristics Simple (not self-intersecting) quadrilateral is a diamond, if and only if it is any of the following: a parallelogram in which the diagonal splits the inner corner parallelogram, in which at least two consecutive sides are equal in length to a parallelogram in which the diagonals are perpendicular (orthodiagonal parallelogram) four-sided with four sides of the same length (by definition) four-way, in which diagonals perpendicular and split each four-sided in which each diagonal separates 2 opposite inland corners of the quadrilateral ABCD that the 4 Triangle ABP, BCP, CDP, and DAP are all congruent 9 four-sided ABCD in which incircles in the TRIANGLEs of ABC, BCD, CDA and DAB have a common point Basic properties Each rhombus has two diagonals connecting the opposite pairs, and two pairs of parallel sides. Using congruent triangles, you can prove that the diamond is symmetrical on each of these diagonals. It follows that any rombus has the following properties: opposite corners of the diamond have an equal measure. The two diagonals of the diamond are perpendicular; that is, the diamond is an orthodiagonal quadrilateral. His diagonals are divided into two positions Corners. The first property implies that each diamond is a parallelogram. Therefore, the diamond has all the properties of the parallelogram: for example, the opposite sides are parallel; The adjacent corners are additional. The two diagonals tease each other; Any line through the middle of the point divides the area. and the sum of the squares of the sides is equal to the sum of the squares diagonally (the law of the parallelogram). Thus, denoting the common side, as well as diagonals, as p and dr, in each rombus 4 a 2 and p 2 q 2 . Displaystyle 4a-{2} {2} q'{2}. Not every parallelogram is a diamond, although any parallelogram with perpendicular diagonals (second property) is a diamond. In general, any four-sided with perpendicular diagonals, one of which is the symmetry line, is the kite. Each diamond is a kite, and any four-sided that is both kite and parallelogram is a diamond. The rombus is a tangential four-way. That is, it has a circle inscribed, which is tangential for all four parties. A rombus. Each angle marked by a black dot is a right angle. H height is a perpendicular distance between any two uncontumed sides, which is equal to the diameter of the inscribed circle. The p and dr diagonal lengths are red dotted segments of the line. Diagonal length diagonal p and AC and q BD can be expressed in terms of rhombus side and one angle top α as p - 2 x 2 cos α displaystyle p'a's sqrt 22's alpha and q 2 y 2 cos α. Displaystyle q'asqrt2-2 cos alpha . These formulas are a direct consequence of the law cosines. Inrady Inrady (radius of the circle inscribed in the diamond) denoted by Mr. can be expressed in terms of diagonal p and q, as '11' p p · y 2 p 2 p 2 q 2 , display style rfrac p'cdot q2'sqrt or {2} in terms of {2}indrance of side length A and any angle of the top α or β as r - sin α 2 - sin 2 - β 2. Display style rfrac asin (alpha) {2} frac a sin (beta {2}). As for all parallelograms, the K rombus area is a product of its base and its height (h). The base is just any side length a: K and · hours. Displaystyle Kaa hkdot h. Area can also be expressed as a base in a square once the sinus of any angle: K 2 · sin α 2 · sin β , display of Haa {2}'cdot sin alpha a'{2}'cdot sin beta, or in terms of the height and angle of the top: K and h 2 sin α , display style Kfrac (h'{2}) sin Alpha, or as half of the product diagonal r, q: K q p · q 2 , displaystyle Kfrac (p'cdot q'{2}), or as half a time the radius of the circle inscribed in the rumbus (inradius): K q 2 a · r . Another way, like the parallelogram, is to consider the two adjacent sides as vectors, forming a bivector, so that the bivector area (the magnitude of the vector product of two vectors) is the defining of the two vectors. K No x1y2 - x2y1. The dual properties of the Double Rumbus landfill are rectangles: the rombus has equal sides, while the rectangle has all equal angles. The Rombus has opposite angles equal, while the rectangle has opposite sides equal. The rombus has a circle inscribed, while the rectangle has a circle. The rombus has an axis of symmetry across each pair of opposite corners of the top, while the rectangle has an axis of symmetry across each pair of opposite sides. The diamond diamonds intersect at equal angles, while the diagonals of the rectangle are equal in length. The figure, formed by joining the middle of the diamond sides, is a rectangle, and vice versa. The Descartes equation of the Romba Parties, focused on origin, with the diagonal of each fall on the axis, consist of all points (x, y) satisfying x a q y b No 1. (display left) Frak xa right (frac) (y'b'b'right) ! Verticals are on (± a, 0) (0.0) and (0, ± b). Display style (0, p.p.b.) . This is a special case of superllipa, with exhibitor 1. Other properties Are one of five types of 2D lattice diamond lattice, also called the center of a rectangular lattice. Identical rhombi can tile a 2D plane in three different ways, including, for 60 diamonds, rombil tiles. As topological square tiles As 30-60 degrees rombil tiles Three-dimensional analogues of the rombus include bipiramide and bicon. Some polygedra have rhombic faces such as rolb dodekaedron and trapezizo-rombahic dodecachedron. Some polygedra with all the rhombic faces Isohedral polyhedra No isohedral polyhedra Identical rhombi Identical golden diamond Two types of rumbi tri type rumby romby romby dodecachedron romby triacontahedron Rombik icosahedron Rombik enneacontahed Romboheadron like a cuboid (also called rectangular parallelepiped), except that its 3 pairs of parallel faces are up to 3 types of diamonds instead of rectangles. The rhyming dodecaheudron is a convex multiedron with 12 congruent diamonds as its faces. The rhyming triced trictron is a convex multiedron with 30 golden diamonds (the diamond whose diagonals are in gold ratio) as its faces. The Diamond Sixty is a rhombic tryacotontagedron. It is a nonconvex with 60 golden diamond faces with icosachegra symmetry. The rhombic enneacontahedron is a polyheedre consisting of 90 rhombic persons, with three, five or six rhombi meeting at each top. It has 60 wide diamonds and 30 thin. Trapezioso-rombic dodecachedron is a convex multiedron with 6 rhombic and 6 trapezoidal faces. The rhombic icosahedron is a multiedrone consisting of 20 rhombic persons, of which three, or five meet at each top. It has 10 individuals

polar axis with 10 faces after the equator. See also Merkel-Raute Rombus Michaelis, in the human anatomy of Romboid, either parallelepiped or paralleleogram, which is neither a diamond nor a rectangular rhombic rhombic antenna Rhombic Chess Flag department of North Santander Colombia, containing four stars in the form of a rumbus Superellipse (includes a rumbus with rounded corners) Links : : the original definition of Euclid and some English words Matmir. Inclusive Use : ῥόμβος Archive 2013-11-08 by Wayback Machine, Henry George Liddell, Robert Scott, Greek-English Lexicon, at Perseus No ρέμβω Archive 2013-11-08 at Wayback Machine, Henry George Liddell, Robert Scott, Greek-English Lexicon, perceal Origin Rhombus. Archive from the original for 2015-04-02. Received 2005-01-25. Salman Usikin and Jennifer Griffin, Classification of the Four-Sided. Exploring the Definition of Archive 2020-02-26 at Wayback Machine, Information Age Publishing, 2008, p. 55-56. Owen Bjer, Felix Lazebnik and Deirdre Smeltzer, Euclidean Geometry Techniques Archive 2019-09-01 at Wayback Machine, Mathematical Association of America, 2010, p. 53. Paris Pamfilos (2016), Rombus Characteristics, Geometricorum Forum 16, page 331-336, Archive 2016-10-23 on Wayback Machine - IMOmath, 26th Brazilian Mathematical Olympiad 2004 (PDF). Archive (PDF) from the original 2016-10-18. Received 2020-01-06. b Weisstein, Eric W. Rhombus. Matmir. - WildLinAlg episode 4 Archive 2017-02-05 in Wayback Machine, Norman J Wildberger, Univ. NSW, 2010, lecture via YouTube de Villiers, Michael, Equilateral Cyclical and Equilateral Limited Landfills, Mathematical Newspaper 95, March 2011, 102-107. External Links Look rhombus in Wiktionary, a free dictionary. The Commons has media related to Romby. Parallelogram and Rhombus - Animated course (Building, District, Region) Rhombus Definition, Mathematics Open Link with Interactive Apple. Rhombus area, Mathematics Open Link - shows three different ways to calculate the area of the rumbus, with an interactive apple extracted from the attributes of a rhombus 3rd grade. attributes of a rhombus 5th grade. attributes of a rhombus 4th grade. attributes of a rhombus and a rectangle. 3 attributes of a rhombus. all attributes of a rhombus. what are three attributes of a rhombus. defining attributes of a rhombus