DYADIC POLYGONS

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Dyadic rationals are rationals whose denominator is a power of 2. Dyadic triangles and dyadic polygons are respectively defined as the intersections with the dyadic plane of a triangle or polygon in the real plane whose vertices lie in the dyadic plane. The one-dimensional analogues are dyadic intervals. Algebraically, dyadic polygons carry the structure of a commutative, entropic and idempotent algebra under the binary operation of arithmetic mean. In this talk, dyadic intervals and triangles will be classified to within affine or algebraic isomorphism, and dyadic polygons will be shown to be finitely generated as algebras.

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