

Pedal sets of unitals embedded in projective planes of square order

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Let U be a unital in a projective plane Π of order q^2 . A line of Π is called *tangent line* to U if it meets U in a single point. If P is a point in $\Pi \setminus U$ and t_P is the set of tangent lines to U through P , then a pedal set of P is defined to be the set of the intersection point of the lines in t_P with U .

In this study, we show that certain line types of a pedal set counts of a unital provides information related to the distribution of secant lines through the points of the unital. Furthermore, we discuss some open problems related to pedal sets of unitals in projective planes of square order .

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