

ON A CLASS OF PUNCTUAL CONVEX FUNCTIONS

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Abstract. The aim of this paper is to show that the inequality of Jensen for real functions holds under a weaker condition than the usual convexity on an interval. Thus, we introduce the concept of *convexity at a point*. We present and discuss the basic properties of the class of functions satisfying the punctual convexity. This concept is further extended to the *lateral convexity at a point*. The interest in these notions is the extensions of some inequalities, as illustrated in this paper. It should be noted that the usual convexity on intervals does not provide a direct answer for these problems.

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