SNEAK–OUT PRINCIPLE ON TIME SCALES

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Abstract. In this paper, we show that the so-called "sneak-out principle" for discrete inequalities is valid also on a general time scale. In particular, we prove some new dynamic inequalities on time scales which as special cases contain discrete inequalities obtained by Bennett and Grosse-Erdmann. The main results also are used to formulate the corresponding continuous integral inequalities, and these are essentially new. The techniques employed in this paper are elementary and rely mainly on the time scales integration by parts rule, the time scales chain rule, the time scales Hölder inequality, and the time scales Minkowski inequality.

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