

1135-33-399

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53718. *Interesting inequalities.*

Two types of inequalities will be discussed. One is an old set of inequalities due to Newton and Maclaurin which contains special cases which should be in a first course in calculus. All that is needed to prove them is Rolle's theorem and when a quadratic has real roots. The three variable cases have geometric consequences which high school students can appreciate. The second types of inequalities are variations on inequalities introduced by Lehmus and Schur, including one in four variables. (Received August 31, 2017)