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Convexity

By the middle of the 19th century, it was recognized that Euler's gamma function had some special properties. One of them will be convexity. A curve is convex if the following is true: take two points on the curve and join them by a straight line; then the portion of the curve between the points lies below the line. A convex function cannot look like a camel's back! It corresponds to a fundamental geometric concept of a function. In this work, we present some concepts developed by Jensen in 1906, in *Sur les fonctions convexes et les inégalités entre les valeurs moyennes*, and mainly Minkowski's work. We discuss some important applications of convexity in variational calculus, linear programming and non-linear programming.