The deviations of a standard graded $k$-algebra are a sequence of numbers that determine its Poincaré series and arise as the number of generators of certain DG algebra resolutions. We study extremal deviations among those of algebras with a fixed Hilbert series. We prove that deviations, like the Betti numbers, do not decrease when passing to initial ideals and lexsegment ideals. We also prove that deviations grow exponentially for Golod rings and for algebras presented by certain edge ideals. (Received September 13, 2015)