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John Myers* (john.myers@oswego.edu). *Three algebras and three definitions of Koszulness*. Preliminary report.

Let R be a standard graded commutative algebra over a field k , let K be the Koszul complex on a minimal set of generators of the irrelevant ideal of R , and let H be the homology of K . Recall that R is said to be *Koszul* if k has a linear free resolution over R . We adapt this definition to apply to K (viewed as a DG algebra) and then to H (viewed as a bigraded algebra). We describe how these three Koszul properties transfer back and forth between the three algebras R , K , and H , and we give several examples of classes of algebras R for which H is Koszul. (Received August 11, 2020)