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Tropical complexes are simplicial complexes together with some additional data. Many of the properties of graphs studied in tropical geometry have higher-dimensional analogues for tropical complexes. Tropical complexes can come from degenerations of varieties, such as a Calabi-Yau hypersurface in a Fano toric variety. They can also be studied from a purely combinatorial perspective. I will introduce tropical complexes and their properties and discuss some examples and conjectures. (Received September 04, 2012)