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This slogan indicates that, while algebraic geometers may study curves, surfaces, etc, that are defined over a field, a model theorist studies arbitrary definable sets over arbitrary structures.

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The first two examples are 1-sorted structures, while the third is a 2-sorted structure.

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First-order model theory starts with an alphabet of symbols, and then explains how to generate and associated triple  $(\mathcal{K}, \Sigma, \models)$  where  $\mathcal{K}$  is the class of all first-order structures in this alphabet,  $\Sigma$  is a class of all first-order sentences in this alphabet, and  $\models$  is a satisfaction relation.