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One of the crowning jewels of 20th century algebra was the proof that over a global field every division algebra (meaning one finite dimensional over its center a global field) is cyclic of exponent equal to degree. Viewing global fields as “one dimensional”, one must ask how differently division algebras behave over “two dimensional” fields. In some ways this study is just beginning. My goal in this talk is present a bit of the current state of information about these division algebras, with an emphasis on the (still) open question of whether every division algebra of prime degree cyclic. (Received September 20, 2007)