

Quiz (Week 03-12-2017 – 07-12-2017) MATH-101, CALCULUS I
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Question 1. Show that $f(x) = 4x^5 + x^3 + 7x - 2$ has exactly one real zero.

Question 2. Suppose that a function f is twice differentiable everywhere, and has three real zeros. Show that f'' must have at least one real zero.

Question 3. You are driving on a straight highway on which the speed limit is 55 mi/h. At 8:05 a.m. a police car clocks your velocity at 50 mi/h and at 8:10 a.m. a second police car posted 5 mi down the road clocks your velocity at 55 mi/h. Explain why the police have a right to charge you with a speeding violation.