Kurs

OBS! Ange kod, kurskod samt linje.

MMA210, Advanced Differential Analysis Assignment 2 , turn in: Course-week 5

- 1. Prove the following version of Sard's theorem: A point x is called critical for the mapping $F : \mathbb{R}^d \to \mathbb{R}^{d'}$ if DF(x) has rank smaller than d'. Prove that F(B) has zero volume measure in $\mathbb{R}^{d'}$, where B is the set of all critical points, for the case d' > d.
- 2. Prove that the following equation system determines a smooth curve passing through the point (1, 0, 1) and find the unit tangent to the curve at this point:

 $x^{2} + y^{2} + z^{2} = 2; \quad x^{4} + y^{5} - z^{2} = 0.$