

Re: Taylor's Theorem

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Also, for multivariable calculus, does anyone have a reference to the most accurate and most general form of Taylor's theorem?

I've seen two forms of the theorem with different hypotheses:

- 1) Requires $k+1$ order partial derivatives to be continuous on some neighbourhood of the reference point. Then says for every x in that neighbourhood, there exists a c in line segment joining ref. point and x such that...
- 2) Requires $k+1$ order partial derivative to be continuous on line segment joining reference point and x . Then says there exists a c in this line segment such that....

The second form is more general than the first, but there must be a reason the first form was stated that way in Apostol's Calculus volume 1 (among other places). Anyone know if the 2nd form is valid?

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