

Re: Basic Calculus Question

This is somewhat more subtle.

Outline:

Note that in any interval where $g(x) \geq 3$, $f'(x)$ can't be too close to 0

(and its sign must be constant). Therefore such an interval can't

be too large. In the largest such interval containing 0, g must

have a maximum.

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Ah... Yes. In particular, this interval must be bounded or otherwise f would fail to be bounded. Then, by Rolle's Theorem, there exists p such that $g'(p) = 0$.

Thanks.

-kira

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