Guidelines for Curve Analysis for given $F(x)$

<table>
<tr><th>The First Derivative Test</th><th>The Second Derivative Test</th></tr>
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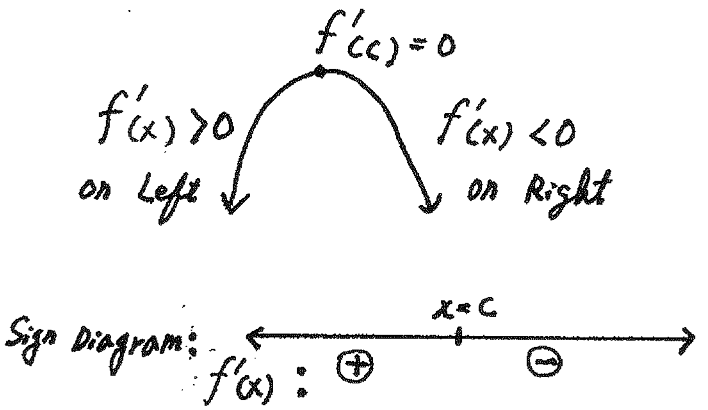
The Critical point $(c, f(c))$ is a relative local max where $f'(c)=0$.



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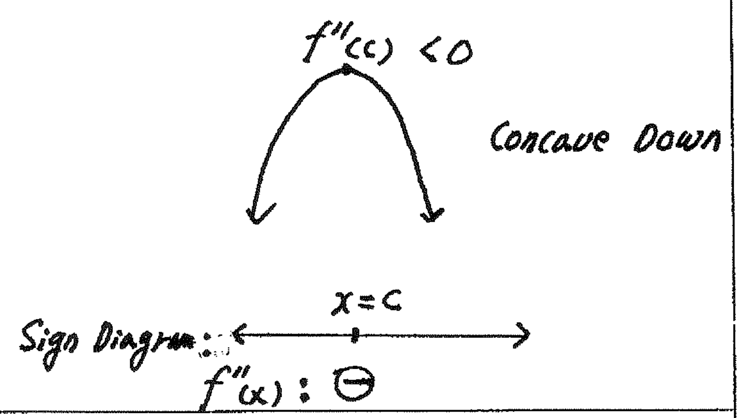
If $f''(c)<0$ at Critical point x=c, $(c, f(c))$ is a relative max.



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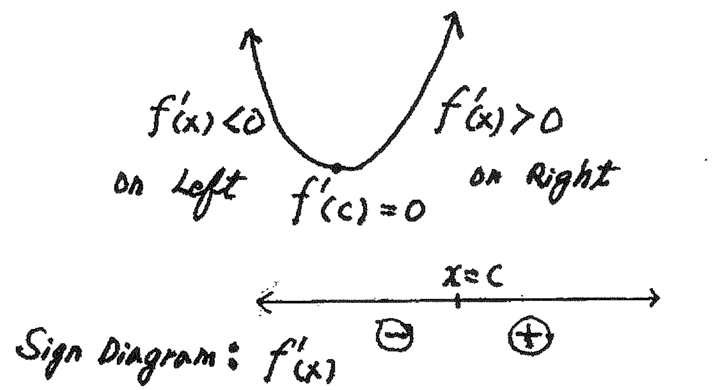
The Critical point $(c, f(c))$ is a relative local min, where $f'(c)=0$.



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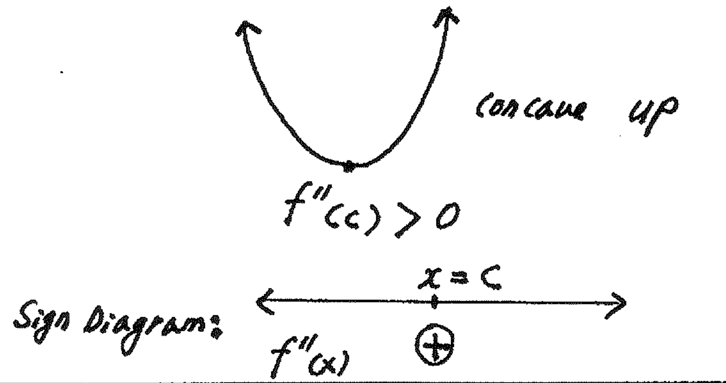
If $f''(c)>0$ at Critical point x=c, $(c, f(c))$ is a relative min.



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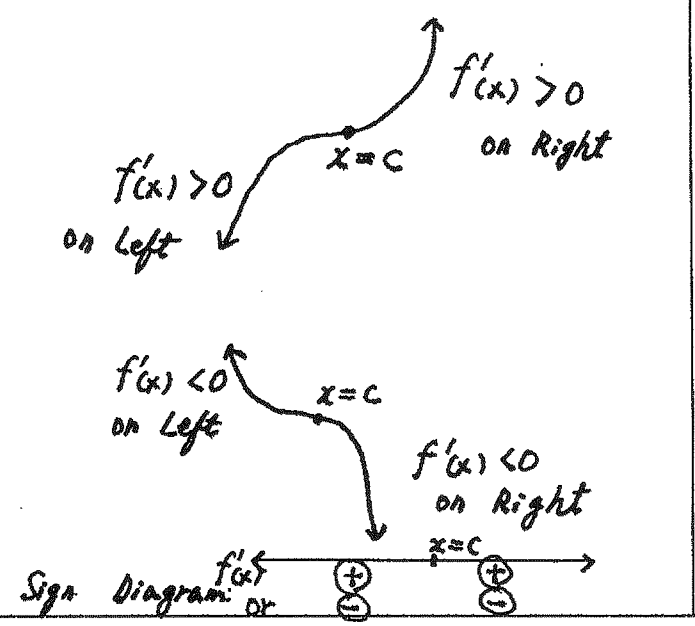
The Critical point $(c, f(c))$ is neither a relative local max or a relative min, where $f'(c)=0$.



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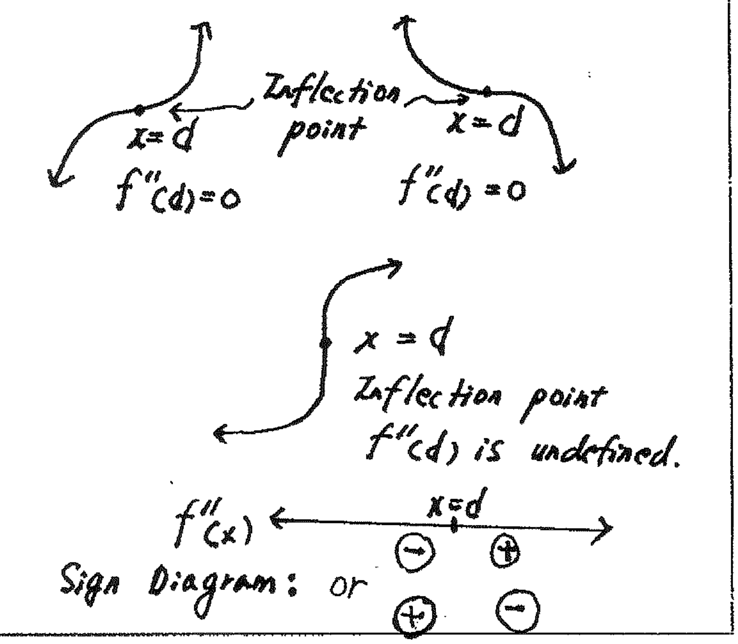
If $f''(d)=0$, $(d, f(d))$ is an inflection point.



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