

3.4 Concavity

* Concave up

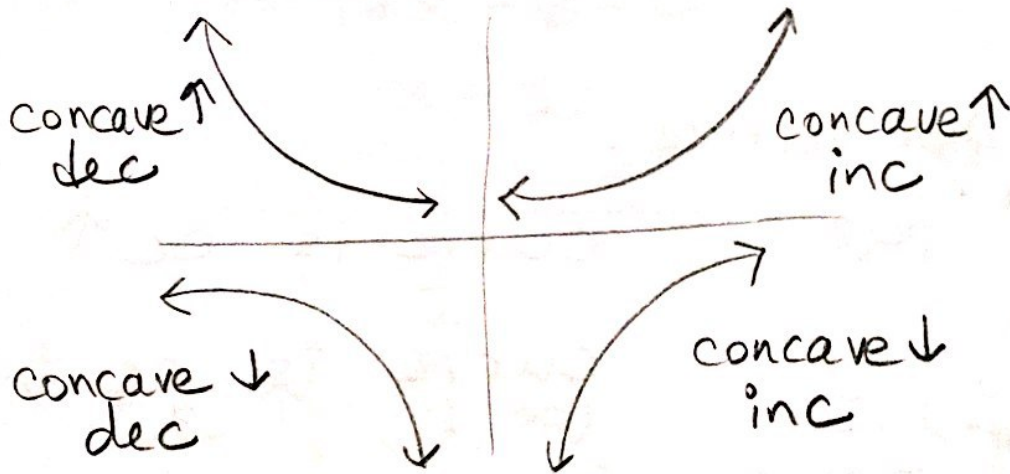
concave down



cup



frown



* inflection point - where a graph changes concavity



Test for Concavity: (2nd Derivative)

- If $f''(x) > 0$ for all x in the interval, then $f(x)$ is concave up
- If $f''(x) < 0$ for all x in the interval, then $f(x)$ is concave down
- If $f''(x) = 0$, then x is a possible inflection point for $f(x)$