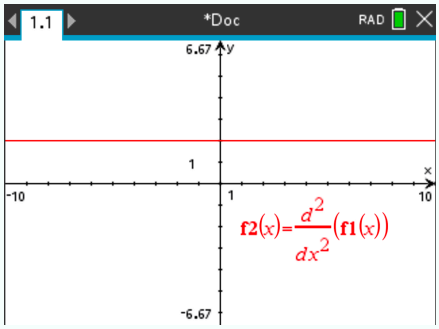
5.10 Second derivative

5.10.1 Graph the second derivative of a function

Suppose you want to graph the second derivative of the following function:

$$f(x) = x^2 + 3x + 1$$

1. Create a new document and select Add Graphs.
2. Write **f1(x)** as the function you want to study.
3. Write $f2(x) = \frac{d^2 f1(x)}{dx}$. To do this, press  and select  .



f2 is then the graph of $f''(x)$. You can thus know when $f''(x) < 0$ or $f''(x) > 0$ by looking at its graph.

Tip: deactivate the graphs you don't want for better readability by checking or unchecking  besides the function definiton.