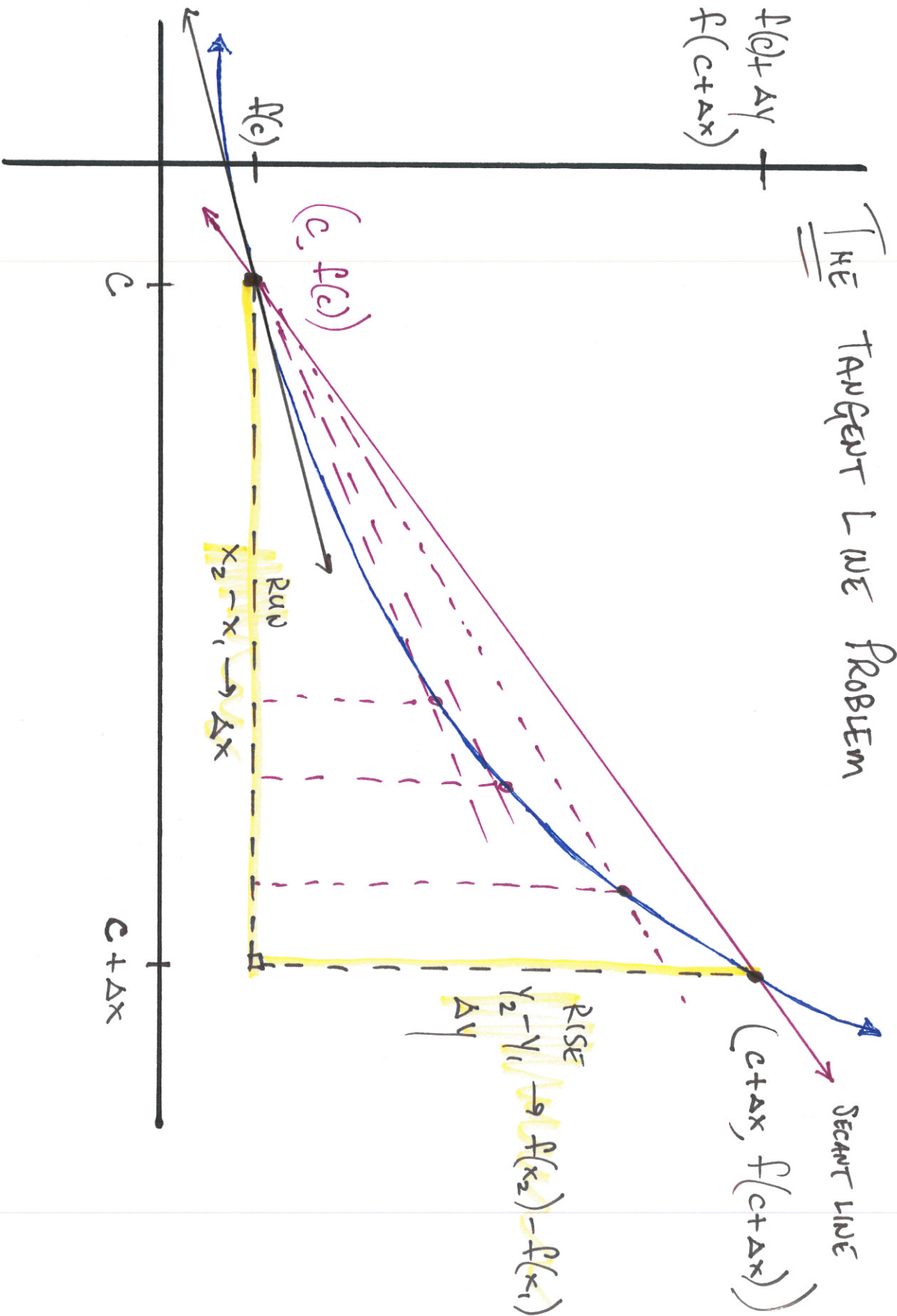


THE TANGENT LINE PROBLEM



$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\Delta y}{\Delta x} = \frac{f(x_2) - f(x_1)}{x_2 - x_1} \rightarrow \frac{\Delta f(x)}{\Delta x}$$

$$M_{\text{sec}} = \frac{f(c+\Delta x) - f(c)}{(c+\Delta x) - c} = \left[\frac{f(c+\Delta x) - f(c)}{\Delta x} \right]$$

Difference Quotient

THE AREA PROBLEM

