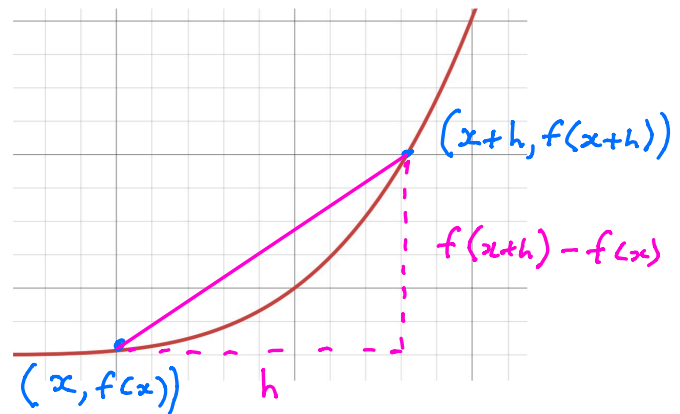


## Differentiation From First Principles Exercise

The derivative of  $f(x)$  written as  $f'(x)$  is defined to be:

$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$



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Exercise      Differentiate from first principles:

1)  $f(x) = 6x^5$

2)  $f(x) = x^2 + 3x + 5$