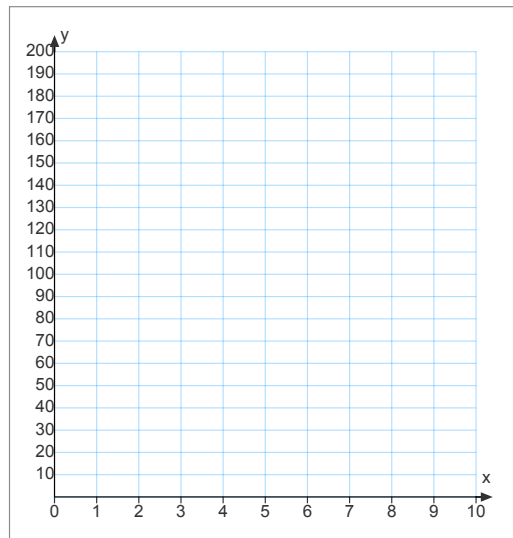# Average Rate of Change

To determine the average rate of change of a function over a given interval, you must find the slope of the "secant" line over the given interval.

Example

A rock is thrown off a cliff, its path is modelled by the function $h(t) = -5t^2 + 20t + 120$
where, t time (seconds)
           $h(t)$ height (metres)
Sketch the function

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A) Determine the height of the cliff?

B) How long does it take for rock to hit the ground after its thrown??

C) Find the average rate of change (speed) of the rock $0 \le t \le 1$.

D) Find the average rate of change (speed) of the rock $2.5 \le t \le 3$.

E) Find the average rate of change (speed) of the rock $4 \le t \le 5$.

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