An example of a strictly concave function:

$$g(x) = -x^2$$



A strictly concave function increases at a decreasing rate, i.e., given  $\Delta x_{AB} = \Delta x_{BC} = \Delta x$ ,  $\Delta y_{BC} < \Delta y_{AB} => \Delta y_{BC} - \Delta y_{AB} < 0$  or  $\Delta (\Delta y) < 0$ 

and decreases at an increasing rate, i.e., given  $\Delta x_{CB} = \Delta x_{BA} = \Delta x$ ,  $\Delta y_{BA} < \Delta y_{CB} => \Delta y_{BA} - \Delta y_{CB} < 0$  or  $\Delta (\Delta y) < 0$ 





The tangent lines of a strictly concave function are *above* the graph of the function.