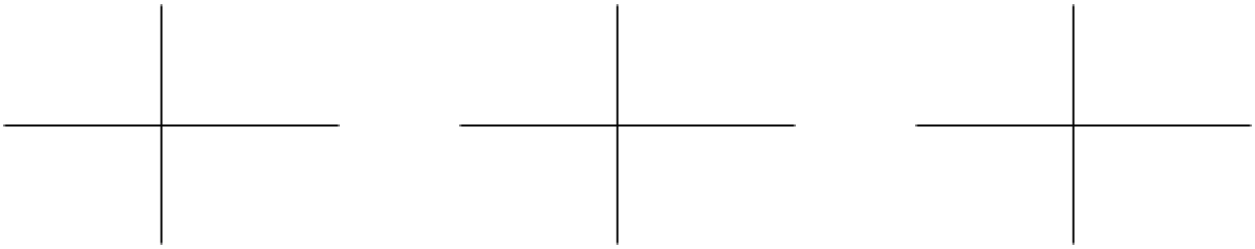
3.2 MAXIMUMS AND MINIMUMS ON AN INTERVAL

Recall: To achieve a maximum and or minimum you set _____

Ex. 1 Determine the max and min values of $f(x) = -x^2 + 6x - 3$ on the interval $4 \leq x \leq 8$.

Here are some possibilities of maximum and minimum situations.



To find max or min values on an interval $a \leq x \leq b$.

Ex. 2 Find the extreme values of $f(x) = -2x^3 + 9x^2 + 4$ on the interval $-1 \leq x \leq 5$.

Ex. 3 The amount of light intensity can be represented by $I(t) = \frac{t^2+2t+16}{t+2}$, where t is the time in seconds and $0 \leq t \leq 14$. Determine the time of minimal intensity.