OPTIMIZATION   [SST 4.6]

<u>**EX 4.6.1:**</u> Find two positive real numbers whose product is 100 and sum is a minimum.

EX 4.6.2: Determine the configuration of a fence which must enclose a rectangular plot of land that borders a straight river.

Exactly 100ft of fencing must be used & the enclosed land's area must be a maximum.

EX 4.6.3: Determine the configuration of an open box made out of a 6" × 20" piece of cardboard that maximizes its volume.

EX 4.6.4: Find the point on the curve $y = \sqrt{x}$ that is closest to the point $(3, 0)$.