(2) Find abs. max/min: $\sqrt{4-x^2}$.

$f(x) = \sqrt{4-x^2}$. domain: $[-2, 2]$. So, abs. max/min exist!

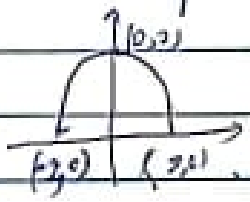
$f'(x) = \frac{-x}{\sqrt{4-x^2}}$. So, 0 is the only critical point on $(-2, 2)$.

- $f(0) = 2$
- $f(-2) = 0$
- $f(2) = 0$.

Thus, abs. max. value is 2. (at $(0, 2)$)

abs. min value $= 0$ @ points $(-2, 0)$, $(2, 0)$.

Note: this is what we found out in example 4 of curve sketching



So, while sketching curves, if you find domain is a closed interval, then you have to apply the 'closed interval test' to find max/min to help you draw.