

Warmup

$f(x)$ = some messy function of x ,
on the interval $[3, 7]$

Assuming it is continuous, here is how to find:

Local min/max

- ① Find the critical points
i.e. set $f' = 0$ and solve for x
set $f' = \text{DNE}$ and solve for x
- ② Use sign chart of f' or sign of f''
to determine behavior at c.p.

Absolute min/max

- ① Find the critical points on the interval
- ② Plug c.p.s and end points, and evaluate f at those points
- ③ Pick the largest and smallest of those f values.