Friday, August 26, 2016

- 1.2 Practice
- 1.2 Max/Min, Boundedness, Even/Odd/Neither
- HW: use etext or MML

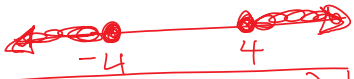
(1) $f(x) = \sqrt{x^2-16}$

$x^2-16 \geq 0$

$x^2 \geq 16$

$x \geq \pm 4$

$x \geq 4$ or $x \leq -4$



Dom: $(-\infty, -4] \cup [4, \infty)$

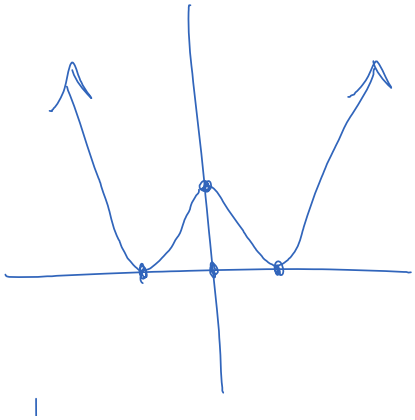
(2) $f(x) = \dfrac{x+1}{(x-3)\sqrt{x+2}}$

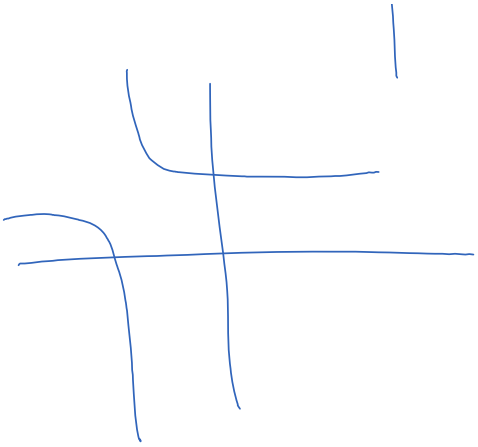
$x \neq 3$

$x+2 > 0$

$x > -2$

Dom $(-2, 3) \cup (3, \infty)$



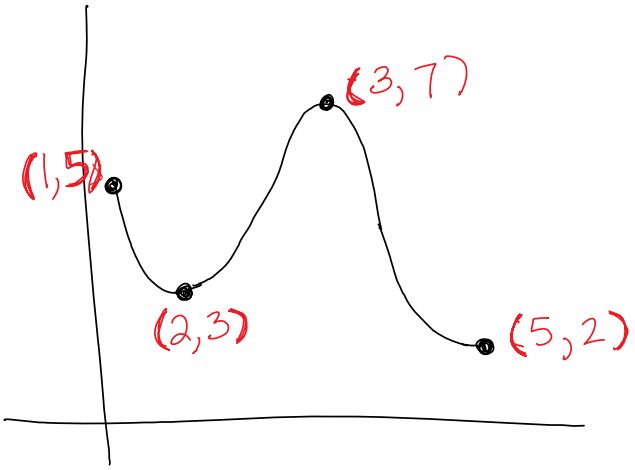


Dom: $x \neq -5$
$(-\infty, -5) \cup (-5, \infty)$

Range: $y \neq 3$
$(-\infty, 3) \cup (3, \infty)$

Decreasing: Domain

Minimums + Maximums



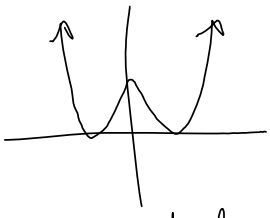
Local Max
(1, 5) 5 at $x=1$
also (3,7)

Local Min
(2,3) 3 at $x=2$
also (5,2)

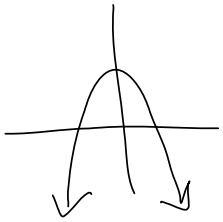
Absolute Max
(3,7) 7 at $x=3$

Absolute Min
(5,2) 2 at $x=5$

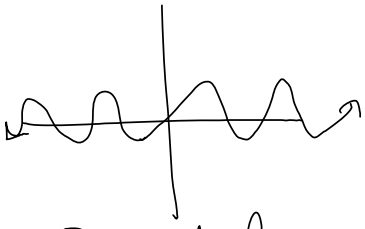
Boundedness



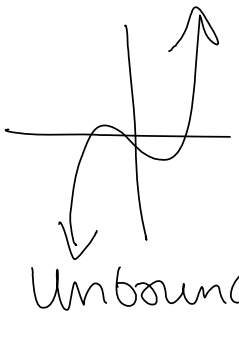
Bounded Below



Bounded Above



Bounded



Unbounded