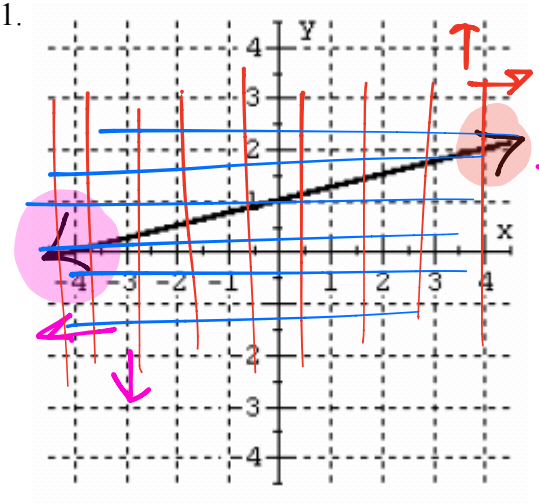
AFM

Name: Unit 2A Day 2 Notes

Analyzing Functions

Directions: Fill in the information for each graph shown.

1.



Domain: $(-\infty,\infty)$ Range: $(-\infty,\infty)$

End Behavior:

$\lim_{x\to\infty} f(x) =$ ∞ (Right) $\lim_{x\to-\infty} f(x) =$ $-\infty$ (left)

*read left to right → interval notation (x-values)

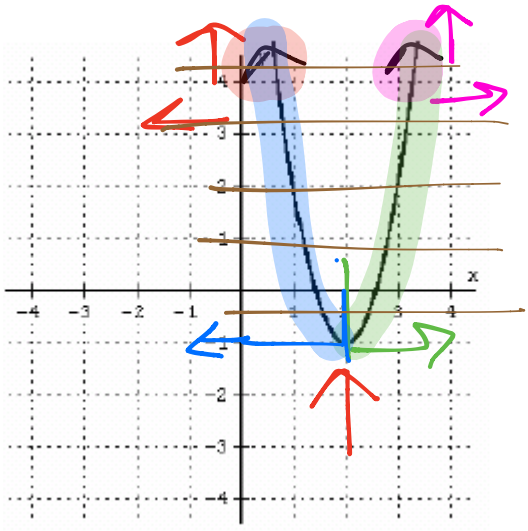
Increasing: $(-\infty,\infty)$ Decreasing: none

x-intercepts: $(-4,0)$ ($y=0$) y-intercepts: $(0,1)$ ($x=0$)

One-to-One Function? yes

↳ pass vertical line test & horizontal test

2.



Domain: $(-\infty,\infty)$ Range: $[-1,\infty)$

End Behavior:

$\lim_{x\to\infty} f(x) =$ ∞ $\lim_{x\to-\infty} f(x) =$ ∞

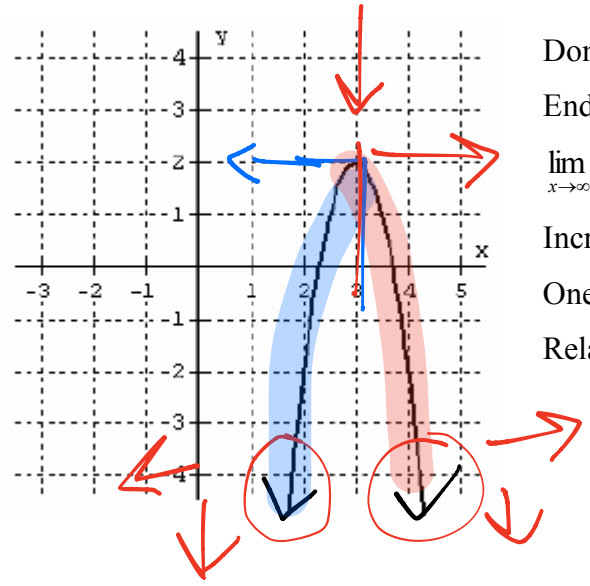
Increasing: $(2,\infty)$ Decreasing: $(-\infty,2)$

One-to-One Function? no

Relative/Absolute Minimum (ordered pair): $(2,-1)$

valley

3.



Domain: $(-\infty,\infty)$ Range: $(-\infty,2]$

End Behavior:

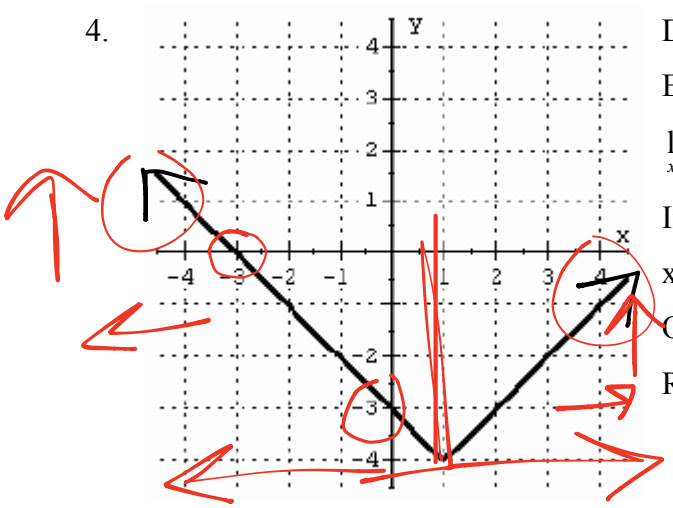
$\lim_{x\to\infty} f(x) =$ $-\infty$ $\lim_{x\to-\infty} f(x) =$ $-\infty$

Increasing: $(-\infty,3)$ Decreasing: $(3,\infty)$

One-to-One Function? no

Relative/Absolute Maximum (ordered pair): $(3,2)$

hill top

4. 

Domain: $(-\infty,\infty)$ Range: $[-4,\infty)$

End Behavior:

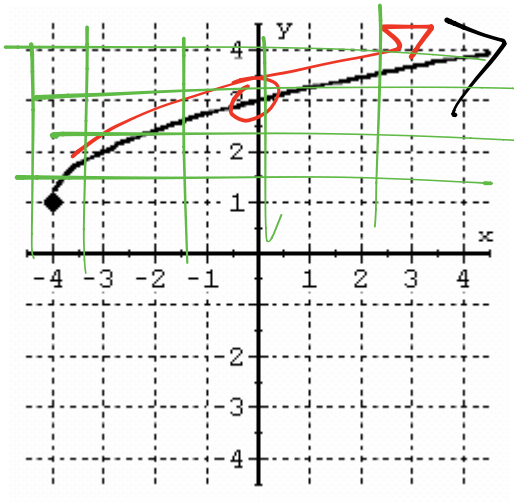
$\lim_{x\to\infty} f(x) = \infty$ $\lim_{x\to-\infty} f(x) = \infty$

Increasing: $(1,\infty)$ Decreasing: $(-\infty,1)$

x-intercepts: $(-3,0)$ $(5,0)$ y-intercepts: $(0,-3)$

One-to-One Function? no

Relative/Absolute Minimum (ordered pair): $(1,-4)$

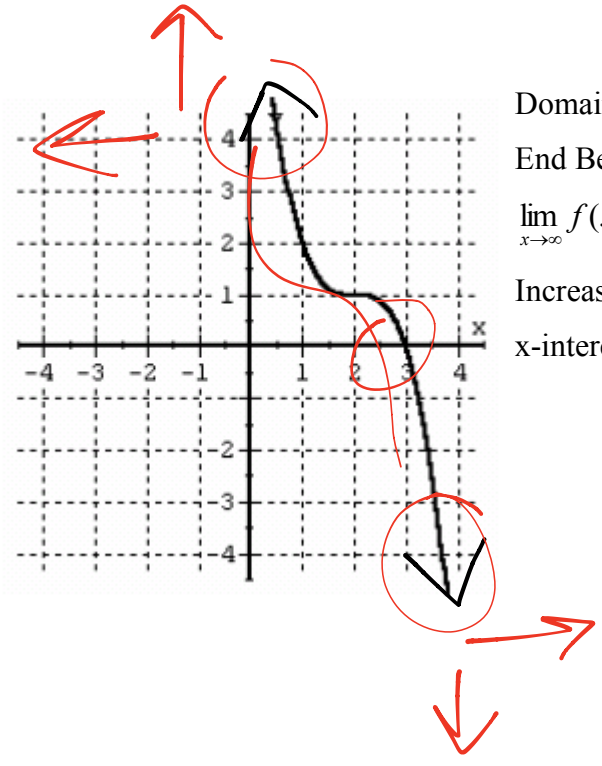
5. 

Domain: $[-4,\infty)$ Range: $[1,\infty)$

Increasing: $(-4,\infty)$ Decreasing: none

x-intercepts: none y-intercepts: $(0,3)$

One-to-One Function? yes

6. 

Domain: $(-\infty,\infty)$ Range: $(-\infty,\infty)$

End Behavior:

$\lim_{x\to\infty} f(x) = -\infty$ $\lim_{x\to-\infty} f(x) = \infty$

Increasing: none Decreasing: $(-\infty,\infty)$

x-intercepts: $(3,0)$