

1.3 Day 2

09/18/15

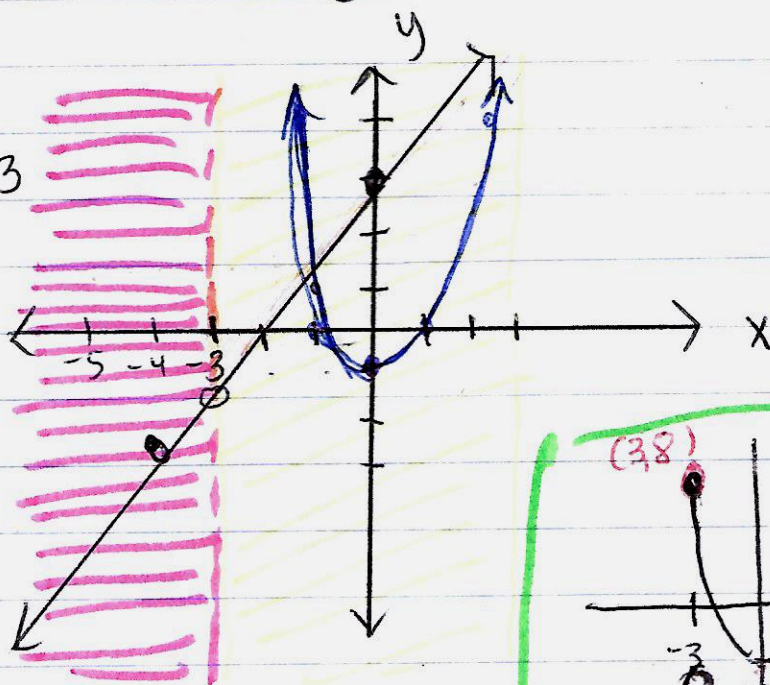
Piecewise functions

Functions whose rule includes several equations (formulas). The formula for each piece is applied to certain values of the function

Ex. (5) Graph

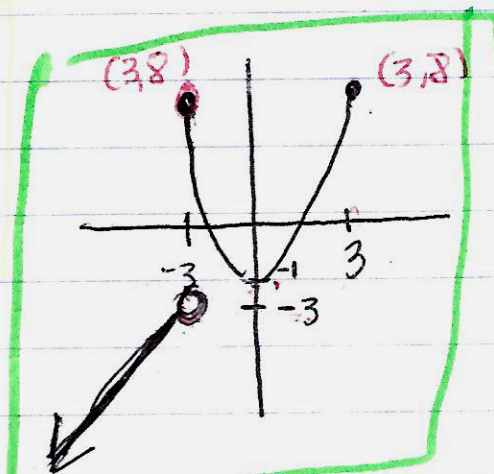
$$f(x) = \begin{cases} 2x+3 & \text{if } x < -3 \\ x^2 - 1 & \text{if } -3 \leq x \leq 3 \end{cases}$$

$$\begin{aligned} f(x) &= 2x+3 \\ f(-4) &= 2(-4)+3 \\ f(-4) &= -5 \end{aligned}$$



$$D: (-\infty, 3]$$

$$R: (-\infty, -3) \cup [-1, 8]$$



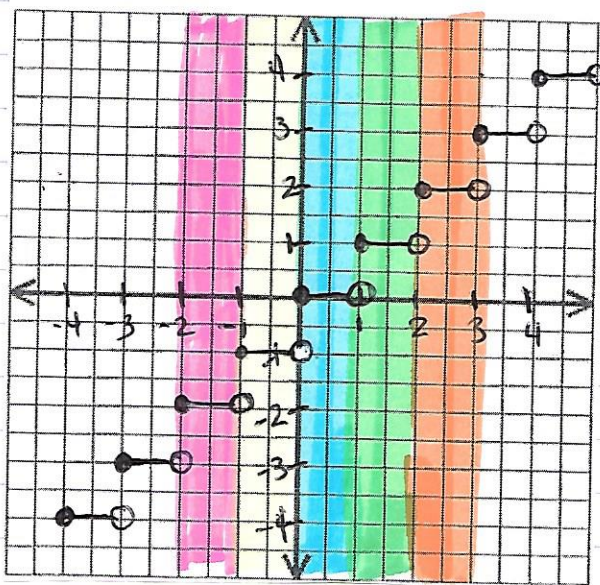
Greatest
Integer
Function

$$f(x) = [x]$$

- a piecewise function with infinite pieces.

$$f(x) = \begin{cases} \dots \\ -2 & \text{if } -2 \leq x < -1 \\ -1 & \text{if } -1 \leq x < 0 \\ 0 & \text{if } 0 \leq x < 1 \\ 1 & \text{if } 1 \leq x < 2 \\ 2 & \text{if } 2 \leq x < 3 \\ \dots \end{cases}$$

Step
function →



$$f(4.7) = 4$$

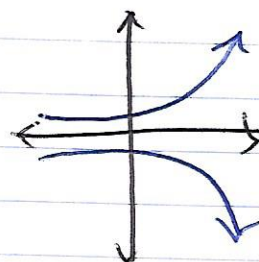
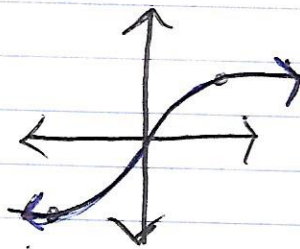
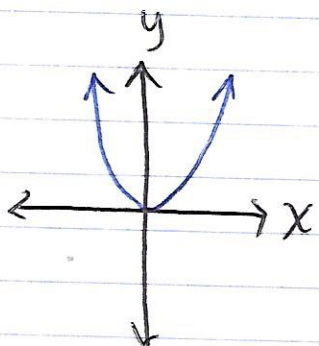
$$f(-3) = -3$$

$$f(0) = 0$$

$$f(\pi) = 3$$

$$f(5/4) = 1$$

Even or odd



Symmetry to y-axis

Even function

Symmetry to origin

odd function

Symmetry to x-axis

Not a function

Classwork 1.3

4 # 11 - 17 odd

8 27 - 33 sketch graph

10 47. $[x] + 2$ 51

18 55, 57, 61, 63, 65, 67, 69, 71