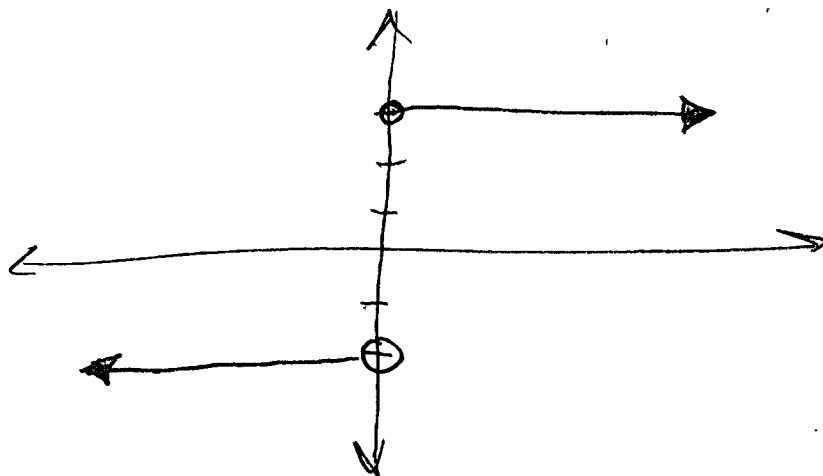


MATH 112 FRIDAY 10-5-12

CLASS NOTES

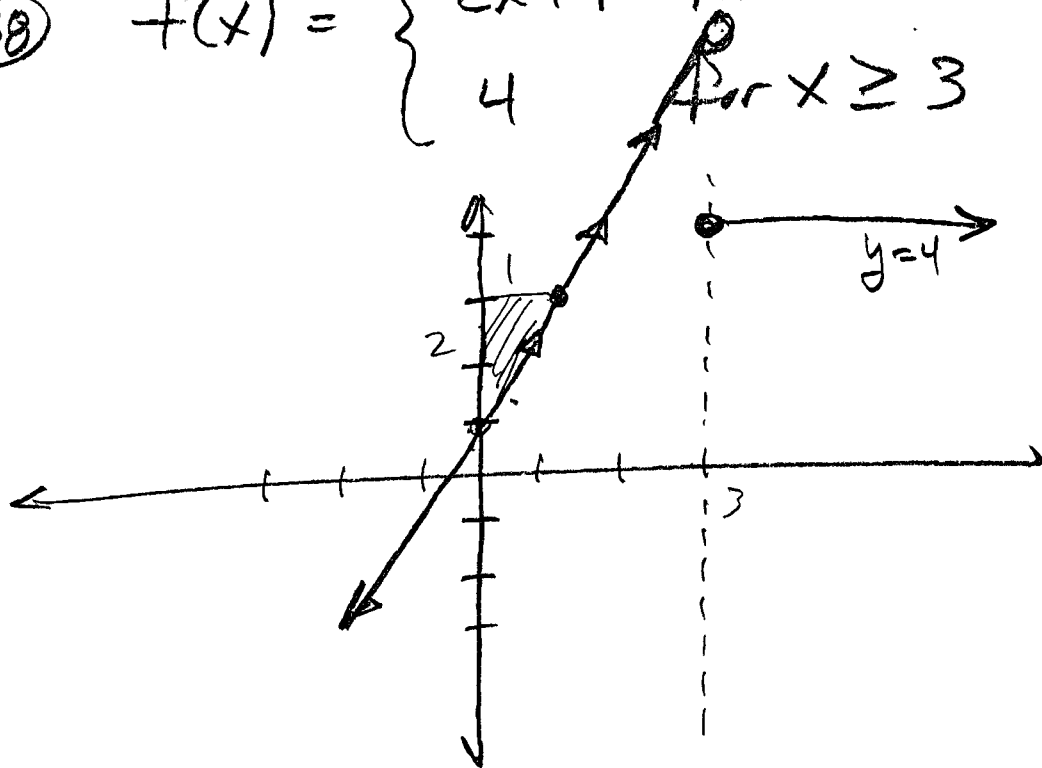
(35) GRAPH $f(x) = \begin{cases} -2 & \text{for } x < 0 \\ 3 & \text{for } x \geq 0 \end{cases}$

pg
374



(36) $f(x) = \begin{cases} -5 & \text{for } x \leq -1 \\ 2 & \text{for } x > -1 \end{cases}$

(38) $f(x) = \begin{cases} 2x+1 & \text{for } x < 3 \\ 4 & \text{for } x \geq 3 \end{cases}$



EX Pg 376

Determine if the function

$f(x) = 5x^2 - 3$ is even, odd, or neither

$f(-x) = ?$ Does it equal $f(x)$?

or does $-f(x) = f(-x)$

$$f(-x) = 5(-x)^2 - 3$$

$$= 5x^2 - 3 \equiv f(x)$$

$\therefore$ Even function

59. $f(x) = 2x$

$$f(-x) = 2(-x) \neq f(x) \text{ NOT EVEN}$$

$$-f(x) \stackrel{?}{=} f(-x)$$

$$= -2x = f(-x) \checkmark \text{ ODD}$$

3.

(64) $f(x) = x^4 - x^2 + 4$ EVEN or ODD?

$f(-x) = f(x)$ EVEN

see WolframAlpha Plot
next page



WolframAlpha™

computational...
knowledge enginePlot $f(x) = x^4$, $f(x) = x^4 - x^2 + 4$ [Examples](#) [Random](#)

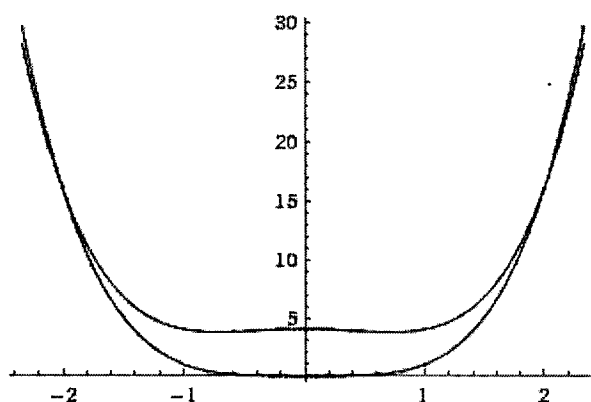
Input interpretation:

plot

$$f(x) = x^4$$

$$f(x) = x^4 - x^2 + 4$$

Plot:



(x from -2 to 2)

— x^4 — $x^4 - x^2 + 4$

Enable interactivity

Computed by Wolfram Mathematica

[Download page](#)