

HW QUESTIONS

3.3 Even — y symmetry

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

Odd — origin symmetry

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

neither

EX:

$$f(x) = x^4 + x^3$$

$$f(-x) = (-x)^4 + (-x)^3 \quad \text{(changed)}$$

$$= x^4 - x^3$$

"neither category"

3.2 #25

$$f(x) = \frac{x+2}{x-6}$$

a) (3, 14) is this a solution?

$$f(3) = \frac{3+2}{3-6} = \frac{5}{-3} \quad \text{NO}$$

e) x-intercepts (y=0)

$$0 = \frac{x+2}{x-6}$$

* denominator isn't useful here.
(can be multiplied by the LCD x-6)

$$x+2=0$$

$$x = -2$$

f) y-intercepts (x=0)

$$f(0) = \frac{0+2}{0-6} = \frac{2}{-6} = -\frac{1}{3}$$