

11/13/2023

polynomials

Functions so far:

leading
coeff

degree

• constants $2, 5, \pi$
no input considered

• lines $f(x) = 2x + 3$

• quadratics

• $f(x) = 2x^2 + 3x + 7$

• cubics: $2x^3 + 4x^2 + 1x + 2$

• quartic: $3x^4 + 5x^2 - 3x + 2$;

• quintic: $3x^5$

• $2x^5 + 1x^2 - 2x + 5$

2

1

2

2

2

3

3

4

2

5

$$f(x) = -3^{20} + x^7 - 3x^{19} + 2$$

degree

19

leading coeff

-3

$$g(x) = 1 + 2x^2 + 3x^4 + 5x^6 + 10x^6$$

deg

6

15

$15x^6$

leading coeff (15)



$n = \text{degree}$

if n is even

arms face same way

leading coeff > 0

leading coeff < 0

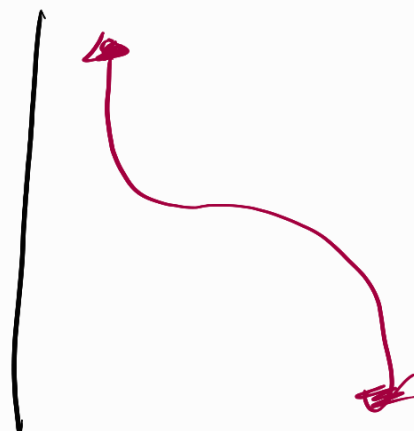
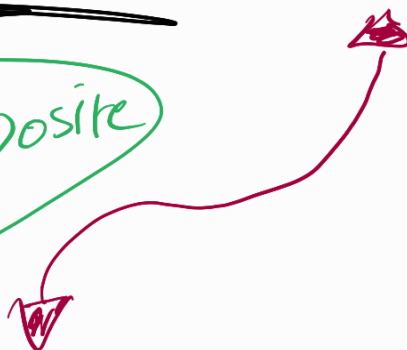


if n is odd

arms face opposite way

leading coeff > 0

leading coeff < 0



$$1 + 15x - 2x^2 + 3x^3 - 4x^4 + 5x^5 - 6x^6 + 7x^7 \\ - \dots + 2022x^{2022} - \underline{\underline{2023x^{2023}}}$$

deg: 2023
devel: coek:
-2023

shape:

