

3.1 Characteristics of Polynomials

$$f(x) = a_n x^n + a_{n-1} x^{n-1} + a_{n-2} x^{n-2} + \dots + a_2 x^2 + a_1 x^1 + a_0 x^0$$

$$\text{ex) } f(x) = 3x^5 - 2x^4 + 8x^3 - 7x^2 + x - 5$$

The exponents ^{on x} must be whole numbers ↑
constant

The coefficients (and constant) will be "integral" for now.

Polynomial or not?

$$\text{a) } y = \sqrt{x} + 5 = x^{\frac{1}{2}} + 5 \quad \times$$

$$\text{b) } y = \sqrt{2} x^3 - 4x + 100 \quad \checkmark$$

$$\text{c) } y = \frac{5}{x} + 13 = 5x^{-1} + 13 \quad \times$$

Graphs of Polynomials

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pg. 110 Ex 2)

- a) D
- b) A
- c) C
- d) B

Key Ideas
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C1-C4