4.2 Polynomials

Need To Know

- Recall like terms
- Some new vocabulary
- Like Terms and polynomials
- Evaluate polynomials

Like Terms

RECALL:

Definition – a **term** is a part of a mathematical expression made of numbers and variables often combined with parentheses, multiplication or division.

Definition – **Like terms** _____

_____

New Vocabulary

Definition– A **polynomial** is a finite sum of terms.

Examples:

Monomials	Binomials	Trinomials	No Special Name

New Vocabulary

Definition– The **degree of a _____** is the number of _____. (If there is only one variable, then the degree is the exponent.)

Definition– The **degree of a _____** is the degree _____, and the leading term is the term with the highest degree.

Definition– The _____ is the numerical factor of the term.

Practice Vocabulary

Answer each for the given polynomial.

The terms

The coefficients

The degree of the terms

The leading term

The degree of the polynomial

Combining Like Terms

Recall

$3x + 6x$

Combine like terms:

1. $7x^2 + 3x + 5x^2$
2. $9b^5 + 3b^2 - 2b^5 - 3b^2$
3. $8x^5 - x^4 + 2x^5 + 5x^4 - 4x^4 - x^6$

Evaluating Polynomials

Find the value of $2x^2 - x + 3$ when $x = -3$

Application with Polynomials

Gigabyte Electronics estimates that the total cost of producing x monitors is given by:

$$4000 + 0.6x^2$$

What is the total cost of producing 200 monitors?

end