P. 305-6 Polynomials Oct 3

1. monomial, binomial, trinomial

$5xy^2$ 1 term : monomial

2. $x+2y$ 2 terms: binomial

3. $a-2b+3c$ 3 terms: trinomial

Any algebraic expressions with one or more terms is a polynomial

State the degree of each monomial

7. $25x^1$ degree: 1

9. 17 no degree

11. $-5x^3y^4$ degree: 7

State the degree of the polynomial:

13. $5x^2y^2 + 3xy^3$ degree: 4

14. $3x + 2y - 5z$ degree: 1

16. $4x^4y^2 + 2x^3y^5 - 23$

degree: 8

the degree of a polynomial is determined by the highest power of a single term.

20. descending power of $x$

$1 + x^3 + x^2 + x^5$

$= x^5 + x^3 + x^2 + 1$ - the highest degree comes first

23. $25xy^2 - 5x^2y + 3x^3y^3 - 4x^4$

$= -4x^4 + 3x^3y^3 - 5x^2y + 25xy^2$

→ degree: 6

# p. 309 Adding Polynomials

5. $2x + 3y - 4xy + 5x - 2y + 6xy$

$= 7x + 2xy + 1y$

6. $2a + 5a - 6b + 8b - 2c + 3c$

$= 7a + 2b + 1c$

9. $(3x^2 + 5x - 4) + (x^2 - 7x + 2)$

$= 4x^2 - 2x - 2$

11. $(2y^3 - 3y^2 - 1) + (-5y^2 - 4y^3 + 3)$

$= -2y^3 - 8y^2 + 2$

14.
$$\begin{array}{r} 5x - 2y + 6 \\ +\ 3x - 6y + 9 \\ \hline 8x - 8x + 15 \end{array}$$

18. $(5z + 6 - 3z^2) + (4 - 7z + 2z^2)$

$= -1z^2 - 2z + 10$

2s. $(4x^2 + 3xy + 2y^2) + (-x^2 - 5xy + 7y^2)$

$= 3x^2 + -2xy + 5y^2$

Homework: p 305 - 6

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