

Algebra 0507

Chapter 8

Intro to WS # 11

Name _____

Polynomials

What is a polynomial?

Sum or Diff of monomials

Degree of a Polynomial?

Highest degree of monomial

Expression	Polynomial?	Monomial, Binomial, Trinomial?	Degree
$3x - 7xyz$ _{1 3}	Yes	Binomial	3
$-7x^4$	Yes	Mono.	4
-25	Yes	Mono.	0
$7n^3 + 3n^{-4}$ _{$7n^3 + \frac{3}{n^4}$}	No	-	-
$9x^3 + 4x + x + 4 + 2x$ $9x^3 + 7x + 4$	Yes	Tri	3

State whether each expression is a polynomial. If the expression is a polynomial, identify it as a monomial, binomial, or trinomial.

1. 36 Yes; Mono	2. $\frac{3}{q^2} + 5$ No	3. $7x - x + 5$ Yes; Bi
4. $8g^2h - 7gh + 2$ Yes; Tri	5. $\frac{1}{4y^2} + 5y - 8$ No	6. $6x - x^2$ Yes; Bi

Find the degree of each polynomial.

7. $4x^2y^3z$ 6	8. $-2abc$ 3	9. $s' + 5t'$ 1
10. 22 0	11. $18x^2 + 4yz - 10y$ _{2 2 1} 2	12. $2x^3y^2 - 4xy^3$ _{5 4} 5

You can only
+/- like terms

Adding & Subtracting Polynomials

Rule:

① Add Coefficients

② Keep Variables/EXP. SAME

1. $\begin{array}{r} a^2 + ab - 3b^2 \\ (+) 4a^2 - ab + b^2 \\ \hline 5a^2 - 2b^2 \end{array}$	2. $\begin{array}{r} 2x + 6y - 3z + 5 \\ 4x - 8y + 6z - 1 \\ (+) \quad x - 3y \quad + 6 \\ \hline 7x - 5y + 3z + 10 \end{array}$
3. $\begin{array}{r} 7a^2 - a + 4 \\ (+) 3a^2 + 4a + 3 \\ \hline 4a^2 + 3a + 7 \end{array}$	4. $\begin{array}{r} 5e^2 - e - 7 \\ (+) 2e^2 + 3e + 4 \\ \hline 7e^2 - 4e - 11 \end{array}$
5. $\begin{array}{r} (2x + 3y) + (4x + 9y) \\ \underline{\quad \quad \quad} \\ 6x + 12y \end{array}$	6. $\begin{array}{r} (11m - 7n) + (2m + 6n) \\ \underline{\quad \quad \quad} \\ 9m - 13n \end{array}$
7. $\begin{array}{r} (5x^2 - x - 7) + (2x^2 + 3x + 4) \\ \underline{\quad \quad \quad} \\ 3x^2 + 2x - 11 \end{array}$	8. $\begin{array}{r} (d^2 - d + 5) + (2d + 5) \\ \underline{\quad \quad \quad} \\ d^2 - 3d + 10 \end{array}$