



Unit 7: Polynomials

OBJECTIVE CHECKLIST AND TOPICS OVERVIEW

Objective	Example	Answer	Rating (Circle One)
Naming Polynomials	$(3x - 7x^2 + 1)$	Quadratic Trinomial	☺ ☹ ☹
Adding Polynomials	$(-x - 7x^2 + 3) + (5x^2 - 4 - x)$	$-2x^2 - 2x - 1$	☺ ☹ ☹
Subtracting Polynomials	$(7x^4 + x^3 - 2x^2 + 1) - (5x^3 - 4x^4 + 2 - 7x)$	$11x^4 - 4x^3 - 2x^2 + 7x - 1$	☺ ☹ ☹
Multiplying Polynomials (distributing a monomial)	$(3k)(5k^4 - 4k^2 + 3)$	$15k^5 - 12k^3 + 9k$	☺ ☹ ☹
Multiplying Polynomials (two binomials ... FOIL)	$(7x + 3)(5x - 4)$	$35x^2 - 28x + 15x - 12$ $35x^2 - 13x - 12$	☺ ☹ ☹
Multiplying Polynomials (binomial to trinomial)	$(2x + 3)(4x^2 - x - 9)$	$8x^3 - 2x^2 - 18x + 12x^2 - 3x - 27 =$ $8x^3 + 10x^2 - 21x - 27$	☺ ☹ ☹
Writing an expression for the area of a figure	<div style="display: flex; align-items: center;"> <div style="margin-right: 10px;">$2x + 4$</div> <div style="border: 1px solid black; padding: 10px; background-color: #d9ead3;"> <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto;"></div> <div style="text-align: center; margin-top: 5px;">$3x - 1$</div> </div> <div style="margin-left: 10px; text-align: right;">$2x - 1$</div> </div> <div style="text-align: center; margin-top: 5px;">$3x + 6$</div> <div style="text-align: right; font-size: small; margin-top: 5px;">MathBits.com</div>	$(2x+4)(3x+6) - (2x-1)(3x-1)$ $6x^2 + 12x + 24$ - ($6x^2 - 2x - 3x + 1$) $29x + 23$	☺ ☹ ☹
Squaring a Binomial	$(2x + 3)^2$	$4x^2 + 12x + 9$	☺ ☹ ☹

Factoring out a GCF	$16q^5 - 21q^4 - 3q$	$q(16q^4 - 21q^3 - 3)$	😊 😐 ☹️
Factoring a Quadratic Trinomial (with a L.C. of 1)	$t^2 + 9t + 14$	$(t + 7)(t + 2)$	😊 😐 ☹️
Factoring a Quadratic Trinomial (with a L.C. not 1)	$12t^2 + 5t - 3$	$(4t + 3)(3t - 1)$ $\begin{matrix} +9t \\ -4t \end{matrix}$	😊 😐 ☹️
Factoring a Quadratic Trinomial with a GCF	$-4x^2 + 5x + 6$	$-1(4x^2 - 5x - 6)$ $-1(4x + 3)(x - 2)$	😊 😐 ☹️
Factoring a Difference of Two Squares (D.O.T.S)	$121w^2 - 49$	$(11w + 7)(11w - 7)$	😊 😐 ☹️
Solving using ZPP	$(2x + 7)(x - 3) = 0$	$2x + 7 = 0$ or $x - 3 = 0$ $x = -\frac{7}{2}$ or $x = 3$	😊 😐 ☹️
Factoring and Solving using ZPP	$x^2 - 5x = -6$	$x^2 - 5x + 6 = 0$ $(x - 3)(x - 2) = 0$ $x = 3$ or $x = 2$	😊 😐 ☹️
Factoring (including a GCF) and Solving with ZPP	$-7x^2 + 14x = 0$	$-7x(x + 2) = 0$ $x = 0$ or $x = -2$	😊 😐 ☹️