

Name: KEY

Section 5.1a – Proficiency Check – Polynomial Basics

What is the degree of the following terms

$2xy^2z^3$ <i>add exponents</i> 6	5 0	x^4y^2 6	$3^2x^3y^4$ <i>not this one, variables only</i> 7
---	--	---	---

Put the following in Descending Order

$2x - 3x^2 + 7$ $-3x^2 + 2x + 7$	$4xy + 3x^2 - 4y^2$ <i>all same degree so alphabetical order</i> $3x^2 + 4xy - 4y^2$
-------------------------------------	--

Evaluate the following Polynomials at $x = -3$

$2x^2 + 3x - 4$ $2(-3)^2 + 3(-3) - 4$ $2(9) - 9 - 4$ $18 - 9 - 4 \rightarrow$ 5	$-3x^3 + 5x^2 - 5x + 12$ $-3(-3)^3 + 5(-3)^2 - 5(-3) + 12$ $-3(-27) + 5(9) + 15 + 12$ $81 + 45 + 15 + 12$ 153
--	---

Multiply the following, leave answers in descending order

$5x(4 + 5y - 3x)$ $20x + 25xy - 15x^2$ $-15x^2 + 25xy + 20x$	$x^2y(xy - xy^2 + y - x + x^2y)$ $x^3y^2 - x^3y^3 + x^2y^2 - x^3y + x^4y^2$ 5 6 4 4 6 $x^4y^2 - x^3y^3 + x^3y^2 - x^3y + x^2y^2$
--	---