

Unit 12 – Polynomials Mini-Review (Lessons: 4/20 – 4/29)

Polynomial Vocabulary

- The polynomial $x^2 - 4x + 9$ is an example of a
 - monomial
 - binomial
 - trinomial
 - none of the above
- The leading coefficient of the polynomial $-3x^4 + 5x^6 - x + 9$ is
 - 4
 - 6
 - 5
 - 3
- Which of the following polynomials are monomials with degree 2?

I	II	III	IV
$2x^2 + 2x$	$2x^2$	x^2	$2x$

- (A) II and III (B) II and IV (C) III and IV (D) I and II

Adding & Subtracting Polynomials

- The sum of $3x^2 - 4x + 8$ and $-x^2 - 2x - 8$ is
 - $2x^2 - 6x$
 - $2x^2 - 2x$
 - $2x^2 - 6x + 1$
 - $2x^2 + 6x$
- Subtract $-2a^2 + 8$ from $5a^2 + 6$.
 - $3a^2 + 14$
 - $7a^2 + 14$
 - $7a^2 - 2$
 - $-7a^2 + 2$

Multiplying Polynomials

6. Simplify: $-3x^3(x^2 - 5x + 2)$

(A) $-3x^6 + 15x^4 - 6x^3$

(B) $-3x^5 + 15x^4 - 6x^3$

(C) $-3x^5 + 15x^3 - 6x^3$

(D) $3x^5 - 15x^4 + 6x^3$

7. Find the product of $2x - 6$ and $x + 11$.

(A) $x^2 - 66x + 16$

(B) $x^2 + 16x + 11$

(C) $2x^2 + 16x - 66$

(D) $2x^2 + 11x - 66$

8. Multiply: $(9x - 1)(6x^2 - x - 4)$

(A) $-3x^2 - 35x + 4$

(B) $54x^3 + 3x^2 - 35x + 4$

(C) $54x^3 - 15x^2 - 35x + 4$

(D) $54x^3 - 35x + 4$

Extended Response

9. Simplify: $(2x + 1)^2$

10. A rectangular garden has a width that is $x - 8$ feet and a length that is $x + 3$ feet. Calculate the **area** and **perimeter** of the garden. Represent your final answers as simplified polynomial expressions written in standard form.