

SPARK Hybrid Education Center

UNIT TEST - December - Intro to Polynomials

Upper Level

Name: _____
Total: 16 questions. Show all work where indicated.

Date: _____ Period: _____

Section 1: Multiple Choice

1. Degree of $4x^3 - 2x + 7$: A) 1 B) 2 C) 3 D) 4
2. $(3x^2+2x)+(x^2-5x+1)$: A) $4x^2-3x+1$ B) $3x^2-3x$ C) $4x^2+7x+1$ D) $2x^2-3x$
3. Product $(x+3)(x-3)$: A) x^2-6 B) x^2-9 C) x^2+9 D) x^2+6
4. FOIL: $(x+2)(x+5)$: A) $x^2+7x+10$ B) x^2+10 C) x^2+7x D) $x^2+3x+10$
5. Leading coefficient of $5x^4+3x^2$: A) 3 B) 5 C) 4 D) 5
6. Monomial with degree 2: A) $3x+1$ B) x^2 C) 2 D) x^3

Section 2: Matching

7. ____ monomial A) polynomial with 2 terms
8. ____ binomial B) polynomial with 3 terms
9. ____ trinomial C) single term
10. ____ degree D) highest exponent in polynomial
11. ____ FOIL E) method to multiply two binomials

Section 3: Show Your Work

12. Add: $(2x^3 - 4x + 1) + (x^3 + 3x^2 - 2)$. Show like-term grouping.
13. Use FOIL: $(x+4)(x-6)$. Show each step (F,O,I,L).
14. Subtract: $(5x^2+3x-7) - (2x^2-x+4)$. Show distribution of negative.

Section 4: Word Problems

15. A rectangle has length $(x+5)$ and width $(x+2)$. Write a polynomial for the area and expand.
16. A square has side $(2x-1)$. Write and expand a polynomial for its perimeter.

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Section 1: Multiple Choice

1. C)3
2. A) $4x^2-3x+1$
3. B) x^2-9
4. A) $x^2+7x+10$
5. B)?5
6. B) x^2

Section 2: Matching

7. C
8. A
9. B
10. D
11. E

Section 3: Show Your Work

12. $3x^3+3x^2-4x-1$
13. $x^2-6x+4x-24=x^2-2x-24$
14. $3x^2+4x-11$

Section 4: Word Problems

15. $x^2+7x+10$
16. $8x-4$