Integrated Math 2
Practice Test Mod 4 & 5   **Show all steps.**

Name_____

Per _____ Date _____

1. Classify each polynomial by a) its degree and b) the number of terms. (Monomial, Binomial or Trinomial)

    $-9x^4y^3 + 7xy + 7x^3y^5$

    a) _____   b) _____

2. Write the polynomial in a) Standard Form and b) state the leading coefficient.
    $7x - 4 - 8x^4 + 6x^3$

    a) _____
    b) _____

3. Find the sum. Show all steps. Write the answer in Standard Form.

    $(3x^2 - 6x^3 - 4 + 5x) + (-7x^3 + 5 + 4x^2)$

    _____

4. Find the sum. Show all steps. Write the answer in Standard Form.
    $(2x^2 + 6y + 3xy) + (3x^2 - 5xy - x)$

    _____

5. Find the difference. Show all steps. Write the answer in Standard Form.
    $(9x^3 + 11 - 7x) - (-2x^3 + 4x^2 + 3x - 13)$

    _____

6. Find the difference. Show all steps. Write the answer in Standard Form.
    $(5x^2y - xy^2 + 5x - 3) - (4xy^2 - 3 - 3y + 7xy)$

    _____

7. The cost of making x tables is given by $20x + 1{,}100{,}000$. The revenue made from selling x tables is given by $0.004x^2 + 15x$.
    a. Write a polynomial for the profit for making and selling x tables.
    b. Find the profit for selling 20,000 tables.

    a)_____
    b) _____(Label answer.)

8. Find the product.

    $(3x^3)(3x^3)$ _____

9. Find the product.

    $(5x^2yz^3)(-4x^3y^2z^3)$ _____

10. Find the product.

    $-x^2y(x^4 - 5y)$ _____

11. Find the product.

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

    _____

12. rectangle has length (5x + 2y) cm and width (3x – y) cm.
a) Write the polynomial for the perimeter of the rectangle. Simplify this polynomial completely and write in Standard Form.
b) Find the perimeter if $x = 3$ and $y = 1$.

a) _____

b) _____ (Label answer.)

13. Multiply. Simplify completely and write in Standard Form. Show all steps.
$(x + 3)(x + 8)$

_____

14. Multiply. Simplify completely and write in Standard Form. Show all steps.
$(5x - 2)(7x + 4)$

_____

15. Multiply. Simplify completely and write in Standard Form. Show all steps.
$(5x^2 + 6)(8x - 4)$

_____

16. Linda has a rectangular garden that's $(3x - 5)$ feet by $(2x + 8)$ feet. She wants to put a fence around the perimeter of the garden. If each foot of fence costs 5 dollars, how much will the total fencing around the garden cost?

_____ (Label answer.)

17. Multiply. Simplify completely. Show all steps.
$(x - 5y)(x^2 + 3xy + 2)$

_____

18. Multiply. Simplify completely and write in Standard Form. Show all steps.
$(x + 7)^2$

_____

19. Multiply. Simplify completely and write in Standard Form. Show all steps.
$(3x - 2y)^2$

_____

20. Multiply. Simplify completely and write in Standard Form. Show all steps.
$(5x + 4y)(5x - 4y)$

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