Exam Review #3: Unit 7: Monomials and Polynomials Algebra 1 Kitt

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_

**Directions**: *Match each vocabulary term by placing the correct letter in the space provided next to each number.*

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| \_\_\_\_\_\_\_\_1. Ascending order | 1. The number in front of the term.
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|  \_\_\_\_\_\_\_\_2. Descending order | 1. When multiplying variables add the exponents.
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| \_\_\_\_\_\_\_\_3. degree | 1. Two or more terms separated by + and -.
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| \_\_\_\_\_\_\_\_4. coefficient | 1. When raising an exponent to an exponent multiply the exponents.
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| \_\_\_\_\_\_\_\_5. polynomial | 1. The highest exponent in a polynomial
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| \_\_\_\_\_\_\_\_6. Law of Exponent (multiplication) | 1. The terms of the polynomial are arranged from greatest to least.
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| \_\_\_\_\_\_\_\_7. Law of Exponent (division) | 1. When dividing variables subtract the exponents.
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| \_\_\_\_\_\_\_\_8. Law of Exponents (Exponent to Exponent) | 1. The terms of the polynomial are arranged from least to greatest.
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**Directions**: *Given the following polynomials label the following*:

 a) The **degree** of the polynomial (highest number exponent)

 b) Number of terms. (separated by + or – signs)

 c) **Leading coefficient** (number in front of the term with the highest exponent)

 d) Is it a binomial, trinomial, monomial or polynomial?

 9. $x^{5}+3x^{4}-2x^{3}+1$ 10. $4m^{3}+2m^{2}+1$

**Directions**: *Rearrange the polynomials so that they are in* ***descending order****: (greatest to least according to the exponent).*

11. $5x^{3}+x^{6}-4x^{4}+6x^{5}+8-x^{2}$ 12. $4x^{2}+6x^{5}-3x^{3}-2+x^{4}$

**Directions**: *Add or subtract the polynomials.*

13. $\left(x^{2}+3x^{4}-8\right)+(-5x^{2}-5x^{4}+2)$ 14. $\left(x^{3}+2x^{5}-x^{2}+6\right)-(6x^{4}-2x^{5}+4x^{2})$

**Directions**: *Multiply the monomials and polynomials.*

18. $4ab^{2}(2a-3b)$ 19. $(x-4)(x-5)$

20. $(2x-3)(4x+5)$ 21. $(x+1)(x+2)$

22. $(x+3)^{2}$ 23. $(x-6)(x+6)$

**Directions**: *Simplify the monomials.*

9. $\frac{30m^{7}n^{5}}{6m^{2}n^{3}}$ 10. $(6a^{2}b^{3})∙(5a^{3}b^{2})$ 11. $(2x^{3}y^{6}z^{4})^{5}$

16. $(m^{3}n^{6}p^{8})(m^{2}p^{5})$ 17. $(a^{3}b^{8})^{4}$ 18. $\frac{12x^{6}y^{7}}{-2x^{5}y^{4}}$

**Directions**: *Find the quotient between the polynomials.*

19. $\frac{3x^{2}+15x^{4}-18x^{6}}{3x}$ 20. $\frac{12x^{4}y^{5}-4x^{5}y^{2}+8x^{7}}{2x}$ 21. $\frac{32x^{4}y^{3}-16x^{5}y^{7}+4x^{5}y^{10}}{4x^{2}y^{3}}$