FIRST PERIODIC TEST IN MATH 8
SY

Name:_____   Section:_____

Multiple Choice: Read each item carefully. Write the letter of the best answer in the blank provided for each item.

____1. Which statement is true?
- a. The square of a binomial is also a binomial
- b. The product of a sum and difference of two terms is a binomial.
- c. The product of a binomial and a trinomial is the square of a trinomial.
- d. The terms of the cube of a binomial are all positive.

____2. Which of the following can be factored?
- a. $0.08x^3 - 27y^3$ b. $1.44(x^2 + 1) - 0.09$ c. $24xy(x - y) + 5(x + y)$ d. $0.027(x^2 + 1)^3 - 8$

____3. Which of the following values of k will make $x^2 - 5x + k$?
- a. 5   b. 12   c. -10   d. -14

____4. What should be multiplied to $(2x - 5)$ to get $4x^2 - 25$?
- a. $2x + 5$ b. $2x - 5$ c. $4x^2 + 10x + 25$ d. $4x^2 - 10x + 25$

____5. What should be multiplied to $(3y + 2)$ to get $27y^3 + 8$?
- a. $3y + 2$ b. $3y - 2$ c. $9y^2 + 6y + 4$ d. $9y^2 - 6y + 4$

____6. Find $(2x - 7)^2$.
- a. $4x^4 - 49$ b. $4x^4 - 14x^2 + 49$ c. $4x^4 - 28x^2 + 49$ d. $4x^4 - 28x^2 - 49$

____7. Multiply: $(8x^3y^2 - z^5)(8x^3y^2 + z^5)$
- a. $64x^6y^4 - z^{10}$ b. $64x^9y^6 - z^{15}$ c. $64x^6y^4 - 16x^3y2z^5 + z^{10}$ d. $64x^6y^4 - 8x^3y^2z^5 + z^{10}$

____8. Multiply: $(m + 3)(m^2 - 3m + 9)$
- a. $m^2 - 9$ b. $m^3 + 9$ c. $m^3 - 2$ d. $m^3 + 27$

____9. Which of the following is a perfect square trinomial?
- a. $x^2 + 10xy + 100y^2$ b. $x^2 - 10xy + 100y^2$ c. $x^2 - 20xy + 100$ d. $x^2 - 20xy + 100y^2$

____10. Which of the following is a sum of two cubes?
- a. $x^3 + 9$ b. $x^3 - 1$ c. $x^6 + 8$ d. $x^6 + 16$

____11. Which of the following are the factors of $81x^2 - 4$?
- a. $(9x + 2)(9x - 2)$ b. $(3x + 2)(3x - 2)$ c. $(3x + 2)(9x^2 - 6x + 4)$ d. $(3x - 2)(9x^2 + 6x + 4)$

____12. What is the greatest common factor in the expression $28x^8y^4z^6 + 16x^3y^4z^5$?
- a. $8x^3y^4z^5$ b. $4x^3y^4z^5$ c. $4x^4y^4z^3$ d. $8x^4y^4z^3$

____13. Factor $3m(m - 4) - (m - 4)$.
- a. $(m - 4)(m + 1)$ b. $(3m - 1)(m - 4)$ c. $(m - 4)^2(3m - 1)$ d. $3m(m - 4)^2$

____14. Factor $7t(t - 5) + (5 - t)$.
- a. $(-t + 5)(7t + 3)$ b. $(-t + 5)(7t - 3)$ c. $(t - 5)(7t + 3)$ d. $(t - 5)(7t - 3)$

____15. Factor $27x^3 - 64$.
- a. $(3x - 4)(9x^2 - 12x + 16)$ c. $(3x - 4)(9x^2 + 24x + 16)$

b. $(3x - 4)(9x^2 + 12x + 16)$ 　　　　　　　　　 d. $(3x + 4)(9x^2 - 24x + 16)$

_____16. Factor $x^2 - 16x + 15$
　　a. $(x + 5)(x - 3)$ 　　　　 b. $(x - 5)(x - 3)$ 　　　　 c. $(x + 15)(x + 1)$ 　　　　　　 d. $(x - 15)(x - 1)$

_____17. Factor $4m^2 + 7mn - 2n^2$.
　　a. $(2m - n)(2m + n)$ 　　　 b. $(4m + n)(m - 2n)$ 　　　 c. $(4m - n)(m + 2n)$ 　　　　　 d. $(4m - 2n)(m + n)$

_____18. Factor $-5x^3 + 5x$.
　　a. $5x(x^2 - 1)$ 　　　　　　 b. $-5x(x^2 + 1)$ 　　　　　 c. $-5x(x + 1)(x - 1)$ 　　　　　 d. $5x(-x^2 + 1)$

_____19. Find the missing term so that $16x^4 +$ _____$+ 25$ forms a perfect square trinomial.
　　a. $20x$ 　　　　　　　　　 b. $20x^2$ 　　　　　　　　 c. $40x$ 　　　　　　　　　　　　 d. $40x^2$

_____20.What is the area of a square whose side is $4x - 1$?
　　a. $16x^2 - 1$ 　　　 b. $16x^2 - 8x + 1$ 　　　　 c. $16x^2 + 8x + 1$ 　　　　 d. $16x^2 + 4x + 1$

_____21. What is the area of a rectangle whose length is $(4x + 3)$ and whose width is $(x - \frac{1}{2})$?
　　a. $4x^2 - x - 3/2$ 　　　　 b. $4x^2 + 2x +3/2$ 　　　　 c. $4x^2 + 5x - 2$ 　　　　　　 d. $4x^2 + x - 3/2$

_____22. The area of a rectangular garden is $(12x^2 - 8x - 15)m^2$, what are its dimensions?
　　a. $(3x - 5)m$ by $(4x + 3)m$ 　　　　　　 c. $(6x - 3)m$ by $(2x - 5)m$
　　b. $(6x + 5)m$ by $(2x - 3)m$ 　　　　　　 d. $(12x - 15)m$ by $(x + 1)m$

_____23. Liza factored the expression $15x^2y^3 + 10x^4y + 5xy$ as $5xy(3xy^2 + 2x^3)$. Did Liza factor it correctly?
　　a. No, because 5xy is not the common factor.
　　b. Yes, because the last term is cancelled out.
　　c. Yes, there exists a common factor on all terms.
　　d. No, because the last term when factored is 1 and should not be omitted.

_____24. Anne squared the expression $3x + 4y$ as $9x^2 + 16y^2$, which of the following statement is correct with the answer of your classmate?
　　a. The answer is correct because to square a binomial distribute the exponent.
　　b. The answer is wrong because the product of squaring a binomial is a trinomial.
　　c. The answer is correct because the product of squaring a binomial is another binomial.
　　d. The answer is wrong because to square a binomial is to multiply the expression by 2.

_____25. Below is the solution of Rogelio in factoring $3x^4 - 243$
　　$3(x^4 - 81)$
　　$(x^2 - 9)(x^2 + 9)$
　　$(x + 3)(x - 3)$
　　Is the solution of Rogelio correct?

　　a. No because the other factors was omitted.
　　b. No because it lacks 3 as its factor.
　　c. Yes because $3x^4 - 243$ is divisible by $x + 3$.
　　d. Yes because the complete factorization of the expression is $(x + 3)(x - 3)$.

TABLE OF SPECIFICATIONS
MATH GRADE 8

TOPICS / OBJECTIVES	KNOWLEDGE	PROCESS	UNDERSTANDING	ITEM NUMBER	TOTAL
1. Find special products and factors of certain polynomials: product of two binomials, product of a sum and difference of two terms, square of a binomial, cube of a binomial and square of a trinomial.					
2. Factor completely different types of polynomials(polynomials with common monomial factor, difference of two squares, sum and difference of two cubes, perfect square trinomials, and general trinomials).					
3. Solve problem involving products and factors of polynomials.					