Name: _____ **Block:** ____ **Date:** _____

Math 9 - Chapter 5 - Pretest

parent/guardian signature

Multiple Choice - PART 1 - NON-CALCULATOR - 15 MINUTES
Circle the choice that best completes the statement or answers the question.

1. In the term $4s^2t^2$, the number 4 is best described as being the
   a. coefficient b. exponent c. polynomial d. variable

2. The term $4z^3$ represents the
   a. difference between 4 and z^3
   b. product of 4 and z^3
   c. quotient of 4 and z^3
   d. sum of 4 and z^3

3. The expression $3s^2 - 4s + 2$ can be described as a(n)
   a. binomial b. equation c. polynomial d. term

4. What is the degree of the term $3p^2$?
   a. 1 b. 2 c. 3 d. 5

5. What is the degree of the polynomial $5g^2 + 2gh - h^2 + 7$?
   a. 1 b. 2 c. 4 d. 7

6. Combine the like terms in $4g^2 - 2g^2 + 2g - 3g + 7$. The answer is
   a. $2g^2 - 3g + 7$ b. $2g^2 - g + 7$ c. $2g^2 + 5g - 7$ d. $6g^2 - g + 7$

7. Simplify $(3a^2 + 2ab - 4) + (2a^2 - 5ab - 6)$. The answer is
   a. $5a^2 + 7ab + 10$
   b. $5a^2 + 3ab + 10$
   c. $5a^2 - 3ab + 10$
   d. $5a^2 - 3ab - 10$

8. Add the following polynomials. $(3k^4 - 2k^3 + k) + (3k^3 - k^2 + 3k) + (6 + 3k^2 - 2k^4)$
   a. $k^4 + k^3 + 2k^2 + 4k + 6$
   b. $3k^4 + 3k^3 + 3k^2 + 3k + 6$
   c. $-2k^4 - 2k^3 - 2k^2 + k + 6$
   d. $k^4 - k^3 - 2k^2 + 4k - 6$

Multiple Choice - PART 2 - CALCULATOR may be used after 15 minutes

9. In the expression $2y^3 + 4y - 5$, the 2 is a(n)
   a. coefficient b. exponent c. term d. variable

10. In the expression $3d^4 + 5d^2 - 15$, the d is a(n)
    a. coefficient b. exponent c. term d. variable

11. Simplify the following expression by grouping like terms. $2m - 3m^2 + 3m - 6 - m + 5m^2 + 2$
    a. $-8m^2 - 2m - 4$ b. $2m^2 + 4m - 4$ c. $-3m^2 + 6m - 8$ d. $-8m^2 + 5m - 4$

The school band has decided to sell coupon books to raise money. The cost of the coupon book is the square of the profit, p, from the sale of the book. The sale price of the book is 4 times the profit, p, from the sale of a coupon book. Use this information to answer questions 12 - 15.

12. The term or polynomial that best shows the cost of a coupon book would be
    a. p^2 b. $4p$ c. $p^2 - 4p$ d. $4p - p^2$

13. The term or polynomial that best shows the sale price of a coupon book would be
    a. p^2 b. $4p$ c. $p^2 - 4p$ d. $4p - p^2$

14. The term or polynomial that best shows the profit from selling a coupon book would be
    a. p^2 b. $4p$ c. $p^2 - 4p$ d. $4p - p^2$

15. The expression that best shows the profit if the band bought 500 coupon books but only sold 450 coupon books would be
    a. $500p^2$ b. $500(4p)$ c. $500p^2 - 450p$ d. $450(4p) - 500p^2$

16. The opposite expression for $2x^2 - 4x + 3$ is
    a. $-2x^2 + 4x - 3$ b. $2x^2 + 4x + 3$ c. $-2x^2 - 4x - 3$ d. $2x^2 - 4x + 3$

17. Subtract the following polynomials. $(7j^2 - 2j) - (-4j + 5)$
    a. $7j^2 + 4j - 5$ c. $7j^2 - 2j - 5$
    b. $7j^2 + 2j - 5$ d. $7j^2 + 6j + 5$

18. Simplify by combining like terms. $(6w^2 - 4w + 2) + (2w^2 + 6w + 3) - (4w^2 + w - 6) - (3w - 3w^2 + 7)$
    a. $7w^2 - 2w + 4$
    b. $w^2 + 6w + 18$
    c. $w^2 + 6w + 4$
    d. $9w^2 - 2w + 2$

Matching

Match the correct term to each of the following descriptions. A term may be used more than once or not at all. Place the correct letter in the blank beside the number.

a. binomial
b. monomial
c. opposite expressions
d. polynomial
e. trinomial

____ 19. two expressions that add to zero
____ 20. the specific name for an expression with one term
____ 21. the specific name for an expression with three terms
____ 22. an algebraic expression made up of terms connected by operations of addition and/or subtraction

Problem

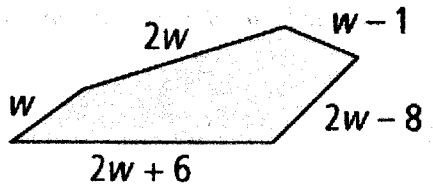
23. Tony wants to sell some of his old CDs and computer games so he can buy a new game machine. The new machine will cost $300. He plans to spend $25 advertising the 21 CDs and 16 computer games he has to sell.
a) Write an expression to show how much money Tony will receive from selling his CDs and games.

b) If Tony sells his CDs for $6 each and his games for $9 each, will he have enough to buy the new machine?

24. A rectangle's length is 15 cm greater than its width, w.
a) Draw the rectangle and label its dimensions.

b) Write and simplify an expression for its perimeter.

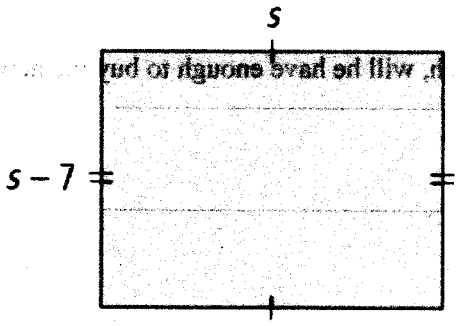
25. Write a simplified expression to describe the perimeter of the figure shown below.



work

simplified

26. **a)** Write a simplified expression representing the perimeter of the figure.



b) If $s = 12$ m, what is the perimeter of the figure?