



**FIRST SUMMATIVE EVALUATION**  
**MATHEMATICS 8**  
**Prepared by: Mr. Jenno E. Benigay**

Name: \_\_\_\_\_ Score: \_\_\_\_\_

Grade and Section: \_\_\_\_\_ Date \_\_\_\_\_

**Read the directions carefully. Review your answers before passing. God bless!**

**Test I.**

**A. Multiple choice. Read each sentence carefully. Write the letter of the correct answer on the line before each number. (10 pts)**

\_\_\_\_\_ 1. Expression that can be written in the form  $p/q$  where  $p$  and  $q$  are polynomials,  $q \neq 0$ .

- a. Binomial                      b. Fraction                      c. Rational

\_\_\_\_\_ 2. Form of the rational expression when the numerator and denominator have no common factors other than 1 and -1.

- a. Quotient                      b. Simplest                      c. Reciprocal

\_\_\_\_\_ 3. What is the first step in dividing a rational expression?

- a. Factor each term  
b. Remove the Fractions  
c. Get the reciprocal of the divisor

\_\_\_\_\_ 4. Frequently the second term of division is \_\_\_\_\_

- a. Dividend                      b. Divisor                      c. Quotient

\_\_\_\_\_ 5. Which is not okay?

- a.  $a/b \div c/d = a/b \cdot d/c$   
b.  $a-b = -1(-a+b)$   
c.  $(a-1)/(a+b) = -1$

\_\_\_\_\_ 6. What operations should be involved in:  $\frac{a}{c} \cdot \frac{b}{d} = \frac{ad \cdot bc}{cd}$

- a. Addition                      b. Subtraction      c. Multiplication

\_\_\_\_\_ 7. Which value of  $y$  makes the expression  $\frac{y-3}{y+4}$  undefined?

- a. -4              b. -3                      c. 3

\_\_\_\_\_ 8. What is the LCM of  $(x-1)$  and  $(x+1)$ ?

- a.  $x^2 + 2x - 1$                       b.  $x^2 - 2x + 1$                       c.  $x^2 - 1$

\_\_\_\_\_ 9. What is the sum of  $\frac{3x^2}{x-2} + \frac{x^2}{x-2}$ ?

- a.  $\frac{3x^4}{(x-2)(x-2)}$               b.  $\frac{3x^4}{x-2}$                       c.  $\frac{4x^2}{x-2}$

\_\_\_\_\_ 10. What is a domain of the rational expression?

- a. Set of variables that makes the expression rationally defined  
b. Set of values for the variable that makes the expression rationally defined  
c. Set of values, which is range, for the variable that makes the expression rationally defined

**B. Identification. Identify what is being stated in each number and write your answers before each number.**

|                 |          |               |                  |             |
|-----------------|----------|---------------|------------------|-------------|
| • rationalizing | • square | • exponents   | • zero exponents | • radicand  |
| • similar       | • index  | • square root | • radix          | • conjugate |

\_\_\_\_\_ 11. Latin word of root.

\_\_\_\_\_ 12. Means a number is being raised to the second power.

\_\_\_\_\_ 13. The number inside the radical sign.

\_\_\_\_\_ 14. A radical sign without an index.

\_\_\_\_\_ 15. The opposite of radical.

\_\_\_\_\_ 16. It is the denominator of your fractional exponents.

\_\_\_\_\_ 17. Any number, except zero, raised to zero is equal to one.

\_\_\_\_\_ 18. The process of removing radicals in your denominator.

\_\_\_\_\_ 19. Radicals with the same indices.

\_\_\_\_\_ 20. Radicals differ in their sign joining the terms.

**C. Tell what rules of exponents you are going to use to simplify the following.**

21.  $t^2 \cdot t^3 =$  \_\_\_\_\_

26.  $(4)^2 =$  \_\_\_\_\_

22.  $t^0 =$  \_\_\_\_\_

27.  $7^{-2} =$  \_\_\_\_\_

$$23. (4 \cdot 5)^2 = \underline{\hspace{2cm}}$$

$$24. (5/3)^5 = \underline{\hspace{2cm}}$$

$$25. w(w^2) = \underline{\hspace{2cm}}$$

$$28. 32 \cdot 32^2 = \underline{\hspace{2cm}}$$

$$29. (1/2)^3 = \underline{\hspace{2cm}}$$

$$30. 10000^{-21} = \underline{\hspace{2cm}}$$