1st 9 Weeks Test Study Sheet 1

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- 1. Macey's fish tank lost $\frac{1}{9}$ of an inch of water each day. Which of the following represents the change in water level after 7 days?
 - a. $6\frac{8}{9}$ inches

c. -7 inches

b. $-\frac{7}{9}$

- d. $\frac{6}{9}$ inches
- 2. Which expression is equal to 16?
 - a. $2^{-7}(2^3)$

c. $2^{10}(2^2)$

b. $4^6(4^{-4})$

d. $4^6(4^{-2})$

- 3. Which number is greater?
 - a. 6×10^5

c. 7×10^{-6}

b. 3×10^6

- d. 7×10^{-5}
- 4. Which of the following would be the best estimate for the population of Alabama.
 - a. 4.8×10^3

c. 4.8×10^4

b. 4.8×10^6

d. 4.8×10^{11}

Short Answer

- 5. What is the first step to evaluate the expression? $17-3 \cdot (8-(1)^5)$
- 6. What is the last step to evaluate the expression? $17+2 \cdot (5-(5)^2)$
- 7. The cost of membership at a health club is \$30 per month for adults and \$15 per mounth for students. On a particular day, seven adults and three students paid membership fees. Write an expression that can be used to calculate the total amount they paid?
- 8. A square has sides 4 centimeters long. The sum of the perimeter of this square and the perimeter of a second square equals 44 centimeters. What is the length of each side of the second square? (Squares have 4 sides. What is the perimeter of the 1st square? What is the perimeter of the 2nd square? Find the side lengths of the 2nd square)
- 9. Which of the examples below could represent an arithmetic solution to a word problem as opposed to an algebraic solution?

Example 1: 7+5+8

Example 2: 6m + 5 = 47

Example 3: 0.3(27)n = 24.3

- 10. It took a scuba diver 10 minutes to dive down 600 feet from the surface of a lake. What is the rate of change of the scuba diver's altitude in feet per minute?
- 11. Write the additive inverse to 24 7.
- 12. What type of number cannot be written as a fraction?
- 13. How do you change $\frac{7}{16}$ to a decimal?
- 14. Estimate to the nearest whole number: 4π
- 15. Which 2 consecutive whole numbers is the $\sqrt{45}$ in between?
- 16. To what classification of numbers (natural, whole, integer, rational, irrational) does $\sqrt{5}$ belong?
- 17. Write the answer using a positive exponent: $\frac{4^{-7}}{4^{-4}}$
- 18. Write the answer using an exponent. $(6^4)^3$
- 19. How many times bigger is 4.5×10^6 compared to 1.5×10^5 ?
- 20. Simplify (8a +12) (5a 4)
- 21. Simplify (9a + 14) + (-6a 9)