

Problems of the Week # 14

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

Date: \_\_\_\_\_

Circle the one best answer. Justify your answer by showing all work below.

66. A theater with a stage has 320 seats. 70% of the seats in the theater were sold for a dance recital held at the end of May. If each ticket sold for the same amount, and the total of all the ticket sales was \$2,016, what was the price of each ticket?

- A. \$4.60      B. \$6.30      C. \$9.00      D. \$15.00      E. \$28.80

67. What is the maximum number of circles that can be made from a piece of string 100 meters long, if the radius of each circle is 5 meters?

- A. 2      B. 3      C. 4      D. 5      E. 6

68. Find the vertex and axis of symmetry of the graph of the function  $f(x) = 4x^2 + 24x - 1$ .

- A.  $(-3, 107); x = -3$       B.  $(3, 35); y = 3$       C.  $(-3, -37); y = -3$   
D.  $(-3, -37); x = -3$       E.  $(3, 107); x = 3$

69. Simplify:  $16^{-\frac{3}{4}}$

- A. -12      B. -8      C.  $-\frac{1}{8}$       D.  $\frac{1}{8}$       E. 12

70. Find an equivalent form of:  $\frac{a}{b} + \frac{b}{a}$ .

- A. 1      B.  $\frac{ab}{a+b}$       C.  $\frac{a+b}{ab}$       D.  $a^2 + b^2$       E.  $\frac{a^2 + b^2}{ab}$