

Problems of the Week # 16

Name: _____

Date: _____

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

76. If $\frac{3}{5}$ of n is 30, then $\frac{2}{5}$ of n is:

- A. 6 B. 10 C. 12 D. 18 E. 20

77. If a rectangular box has sides of length x , $x-4$, and $x+3$ (where $x > 4$), then the surface area of the box can be represented by which of the following expressions?

- A. $6x-2$ B. $3x^2-2x-12$ C. x^3-x^2-12x
 D. $6x^2-4x-24$ E. $3x-1$

78. Find an equation of the inverse of $y = -2x - 3$.

- A. $y = 2x + 3$ B. $y = \frac{1}{2}x - 3$ C. $y = -\frac{1}{2}x - \frac{3}{2}$
 D. $y = \frac{1}{2}x + \frac{3}{2}$ E. $y = -\frac{1}{2}x + \frac{3}{2}$

79. Multiply 8×10^m by 0.2×10^n , and then write the product in scientific notation.

- A. 1.6×10^{mn} B. $1.6 \times 10^{m+n}$ C. 16×10^{mn} D. $1.6 \times 100^{m+n}$ E. $16 \times 10^{m+n}$

80. What kind of function would best model the data below, where t is the independent variable and h the dependent variable?

t	0	0.5	1	1.5	2	2.5	3	3.5
h	5	29	45	53	53	45	29	5

- A. linear B. exponential C. quadratic D. rational E. absolute value