

Day 10 Math Lesson

1. When $\frac{1}{3}k + \frac{1}{4}k = 1$, what is the value of k ?
 - A. $\frac{1}{7}$
 - B. $\frac{12}{7}$
 - C. $\frac{7}{2}$
 - D. 6
 - E. 12

2. Which of the following expressions is equivalent to $x^{2/3}$?
 - F. $\frac{x^2}{3}$
 - G. $\frac{x(2)}{3}$
 - H. $\sqrt{x^3}$
 - J. $\sqrt[3]{x}$
 - K. $\sqrt[3]{x^2}$

3. For what value of x is the equation $2^{2x+7} = 2^{15}$ true?
 - A. 2
 - B. 4
 - C. 11
 - D. 16
 - E. 44

4. If $3^x = 54$, then the following must be true?
 - F. $1 < x < 2$
 - G. $2 < x < 3$
 - H. $3 < x < 4$
 - J. $4 < x < 5$
 - K. $5 < x$

5. $(3x^5)(7x^9)$ is equivalent to :
- A. $10x^4$
 - B. $10x^{14}$
 - C. $10x^{45}$
 - D. $21x^{14}$
 - E. $21x^{45}$
6. Tracy is trying to find a wrench to fit a bolt. The $\frac{3}{8}$ -inch wrench is too large, and the $\frac{5}{16}$ -inch wrench is too small. Which of the following could be the size of the wrench that will fit the bolt exactly?
- F. $\frac{1}{4}$ inch
 - G. $\frac{9}{32}$ inch
 - H. $\frac{11}{32}$ inch
 - J. $\frac{25}{64}$ inch
 - K. $\frac{13}{32}$ inch
7. Which of the following is equivalent to $(x + 2)^0$ whenever x is not equal to -2 ?
- A. $x + 2$
 - B. 0
 - C. 1
 - D. 2
 - E. 3
8. For a certain plant, the recommended nighttime temperature range in degrees Fahrenheit is $59 \text{ degrees} \leq F \leq 68 \text{ degrees}$. Given the formula $C = \frac{5}{9}(F - 32)$, where C is the temperature in degrees Celsius and F is the temperature in degrees Fahrenheit, what is the corresponding nighttime temperature range in degrees Celsius for the plant?
- F. $0 \text{ degrees} \leq C \leq 5 \text{ degrees}$
 - G. $5 \text{ degrees} \leq C \leq 10 \text{ degrees}$
 - H. $10 \text{ degrees} \leq C \leq 15 \text{ degrees}$
 - J. $15 \text{ degrees} \leq C \leq 20 \text{ degrees}$
 - K. $20 \text{ degrees} \leq C \leq 25 \text{ degrees}$