2 **Chapter 2 Test, Form 1**

Write the letter for the correct answer in the blank at the right of each question.

1. Translate the following sentence into an equation.
Twice a number m minus three equals the sum of m and five.

   A $2(m - 3) = m + 5$ **C** $2m - 3 = 5m$

   B $2m - 3 = m + 5$ **D** $2(m - 3) = 5m$ **1.** _____

2. Translate the following equation into a verbal sentence.
$x + 5 = 2(7 + x)$

   F   The quotient of x and five is two times seven plus x.

   G   The number x plus five is two times the sum of seven and x.

   H   The number x plus five is two times seven plus x.

   J   The product of x and five is the sum of two times seven and x.   **2.** _____

3. Solve $y - 18 = -3$.

   A −21   **B** 21   **C** −15   **D** 15   **3.** _____

4. Solve $5n = 35$.

   F   30   **G** 7   **H** 40   **J** 165   **4.** _____

5. Solve $\frac{3}{5}x = 15$.

   A 9   **B** 5   **C** 25   **D** 75   **5.** _____

6. Solve $2t + 1 = 3$.

   F 1   **G** −1   **H** 2   **J** −2   **6.** _____

7. A number is added to 9. The result is then multiplied by 4 to give a new result of 120. What is the number?

   A 21   **B** 39   **C** 489   **D** $4(n + 9) + 120$ **7.** _____

8. Evaluate $|2b - 5| + 1$ if $b = 1$.

   F −2   **G** 2   **H** 4   **J** −8   **8.** _____

9. Solve $|c - 5| = 7$.

   A ∅   **B** {−4, 4}   **C** {−4, 6}   **D** {−2, 12}   **9.** _____

10. Which ratio forms a proportion with $\frac{7}{14}$?

   F $\frac{4}{9}$ **G** $\frac{5}{12}$ **H** $\frac{2}{5}$ **J** $\frac{3}{6}$ **10.** _____

2   **Chapter 2 Test, Form 1** *(continued)*

11. Solve the proportion $\frac{2}{7} = \frac{x}{42}$.

   A $\frac{1}{2}$ **B** 12   **C** $\frac{2}{7}$ **D** 6   11. _____

12. Solve $3t - 6 = t - 2$.

   F -2 **G** -4 **H** 2   **J** 1   12. _____

13. Solve $4(t + 1) = 6t - 1$.

   A $2\frac{1}{2}$ **B** 1   **C** 0   **D** $1\frac{1}{2}$ 13. _____

14. Solve $5(g - 2) + g = 6(g - 4)$.

   F all numbers   **G** 0   **H** 2   **J** Ø   14. _____

15. Solve $ax - 5 = b$ for a.

   A $x(b + 5)$ **B** $\frac{b - 5}{x}$ **C** $\frac{b + 5}{x}$ **D** $x(b - 5)$ 15. _____

16. Find the percent of change.   original: 10   new: 12

   F 12%   **G** 25%   **H** 20%   **J** 18%   16. _____

17. A baseball costs $4.00. If the sales tax is 5%, what is the total price?

   A $3.80   **B** $4.20   **C** $4.05   **D** $4.50   17. _____

18. How many liters of pure acid must be added to 3 liters of a 50% acid solution to obtain a 75% acid solution?

   F 1 L   **G** 4.5 L   **H** 1.5 L   **J** 3 L   18. _____

19. Joe and Janna leave home at the same time, traveling in opposite directions. Joe drives 45 miles per hour and Janna drives 40 miles per hour. In how many hours will they be 510 miles apart?

   A 7 hours   **B** 6 hours   **C** 5 hours   **D** 4 hours   19. _____

20. **TEMPERATURE** In Death Valley, California, the highest ground temperature recorded was 94°C on July 15, 1972. In the formula $C = \frac{5}{9}(F - 32)$, C represents the temperature in degrees Celsius and F represents the temperature in degrees Fahrenheit. To the nearest degree, what is the highest ground temperature in Death Valley in Fahrenheit?

   F 201°F   **G** 84°F   **H** 34°F   **J** 137°F   20. _____

Bonus A concrete mixture is made with 3 parts water and 5 parts cement. If 27 parts of water are being used in the current batch of concrete, how many parts of cement are being used?   **B:** _____