Test, Form 2A

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

1. Which expression is equivalent to $\frac{1}{4}(4 + 9)$?

    A. $\frac{1}{4}(13)$

    C. $\frac{1}{4}(4) + \frac{1}{4}(9)$

    B. $\left(\frac{1}{4} + 13\right) \cdot \left(\frac{1}{4} + 13\right)$

    D. $\left(\frac{1}{4} + 4\right) \cdot \left(\frac{1}{4} + 9\right)$

    1. _____**C**_____

2. $-\frac{2}{5}(15 - 5)$ is equivalent to which value?

    F. -6 **G.** -4 **H.** 2 **J.** 8

    2. _____**G**_____

3. Which expression has the same value as $-4(-5 + x)$?

    A. $-4(-5) + (-4)x$

    C. $(-4 - 5) \cdot (-4 + (-x))$

    B. $-4(5) - 4x$

    D. $(4 - 5) \cdot (-4 - x)$

    3. _____**A**_____

4. Which of the following expressions can be written as $\frac{1}{6}(x + y)$?

    F. $\frac{1}{6}xy$

    H. $\frac{x}{6} \cdot \frac{y}{6}$

    G. $\frac{1}{6}xy + \frac{1}{6}yx$

    J. $\frac{1}{6}x + \frac{1}{6}y$

    4. _____**J**_____

5. Admission to an art museum is \$12 for students. Which expression can be used to mentally compute the total cost of admission tickets for 60 students?

    A. $60(10 + 2)$

    C. $6(12 + 10)$

    B. $12 \cdot 2 + 60 \cdot 10$

    D. $10(30 + 30)$

    5. _____**A**_____

6. Which expression has a coefficient of 0.5?

    F. $-0.5x$

    H. $4 + 0.5x$

    G. $0.5x + 0.25x$

    J. $4 + 0.5$

    6. _____**H**_____

7. Which of the following expressions correctly combines like terms?

    A. $4x + 7 + 2x - 4y = 6x + 3y$

    B. $2x + 7y + 2x - 4y = 4x + 3y$

    C. $2x + 7y + 2x - 4 = 4x + 3y$

    D. $4x + 7y + 2x + 4y = 6x + 3y$

    7. _____**B**_____

Test, Form 2A   *(continued)*

8. Mateo and Haley both collect coins. Mateo has 8 more coins in her collection than Haley. Which expression represents the total number of coins in both collections?

F. $2c + 8$ **G.** $c + 8$ **H.** $2c(8)$ **J.** $8 - 2c$ 8. ____**F**____

9. Bradley rents a fishing boat for the day. The total cost for gasoline is represented by the expression $3.25m + 15$. What is the constant in the expression?

A. 3.25   **B.** 15   **C.** m **D.** $3.25m$ 9. ____**B**____

10. A triangle has side lengths of $(4x - 10)$ units, $(2x + 6)$ units, and $5x$ units. Which expression represents the perimeter of the triangle?

F. $(11x + 16)$ units   **H.** $(11x - 4)$ units

G. $(6x - 4 + 5)$ units   **J.** $(14x + 8x + 5x)$ units   10. ____**H**____

11. The acute angle measures of a triangle are $(x + 25)°$, $(x - 5)°$, and $(2x - 40)°$. What are the angle measures of the triangle?

A. $45°, 60°, 75°$ **C.** $5°, 25°, 40°$

B. $45°, 45°, 90°$ **D.** $30°, 75°, 75°$ 11. ____**A**____

12. What is the GCF of $100xyz$ and $25xz$?

F. $100x$ **H.** $25xz$

G. $5xyz$ **J.** 4 12. ____**H**____

13. Which of the following expressions cannot be factored?

A. $\frac{1}{2}xy + x$ **C.** $\frac{x}{4} + \frac{y}{2}$

B. $4x + y$ **D.** $4xy + 4$ 13. ____**B**____

14. The expression $(2.2x + 8)$ represents the number of miles Trent jogged during a race, and $5x$ represents the number of miles that Ling jogged during the same race, in x hours. Write an expression to show how many more miles Ling jogged than Trent.

14. $5x - (2.2x + 8)$ or $2.8x - 8$

15. The area of a rectangular hot tub cover is $(8x - 2)$ square units. What are possible dimensions of the hot tub cover?

15. Sample answer: 2 units by $(4x - 1)$ units