Test, Form 1B

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

For Exercises 1–3, which expression represents the phrase?

1. six increased by two

    A. $\dfrac{6}{2}$ **B.** $6 - 2$ **C.** $6 + 2$ **D.** $6 \cdot 2$ 1. ____**C**____

2. eight times a number

    F. $8x$ **G.** $8 - y$ **H.** $8 + z$ **J.** $8 + 8$ 2. ____**F**____

3. m decreased by 9

    A. $9 + m$ **B.** $9 - m$ **C.** $m - 9$ **D.** $9m$ 3. ____**C**____

For Exercises 4–9, what is the value of each expression?

4. $3 \cdot 2 + 5$

    F. 24 **G.** 20 **H.** 11 **J.** 9   4. ____**H**____

5. $6 + 9 - 3$

    A. 7 **B.** 8 **C.** 10 **D.** 12   5. ____**D**____

6. $3(2 + 6) - 10$

    F. 37 **G.** 26 **H.** 14 **J.** 8   6. ____**H**____

7. $a - b$, if $a = 11$ and $b = 8$

    A. 3 **B.** 18 **C.** 19 **D.** 8   7. ____**A**____

8. $k + p - 15$, if $k = 10$ and $p = 9$

    F. 4 **G.** 5 **H.** 19 **J.** 34   8. ____**F**____

9. $u + 4v$, if $u = 7$ and $v = 3$

    A. 11 **B.** 14 **C.** 19 **D.** 31   9. ____**C**____

For Exercises 10 and 11, what property supports each statement?

10. $(3 \cdot 5) \cdot 7 = 5(3 \cdot 7)$

    F. Associative ($\times$) **H.** Commutative ($\times$)

    G. Identity ($\times$) **J.** Substitution   10. ____**F**____

11. $5 + 4 = 4 + 5$

    A. Associative ($+$) **C.** Commutative ($+$)

    B. Identity ($+$) **D.** Substitution   11. ____**C**____

For Exercises 12 and 13, which expressions are equivalent?

12. $n + (8 + 7)$

    F. $7n + 8$ **G.** $8n + 7$ **H.** $n - 1$ **J.** $n + 15$ 12. ____**J**____

13. $9 + (7 + m)$

    A. $16 + m$ **B.** $16m$ **C.** $7m + 9$ **D.** $63m$ 13. ____**A**____

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Test, Form 1B   *(continued)*

For Exercises 14 and 15, refer to the coordinate plane.

14. Choose the point for the ordered pair (3, 5).

   F. *H*   **H.** *E*

   G. *G*   **J.** *B*

14. ____**F**____

15. Which ordered pair names point *J*?

   A. (2, 8)   **C.** (1, 9)

   B. (4, 7)   **D.** (7, 4)

15. ____**D**____
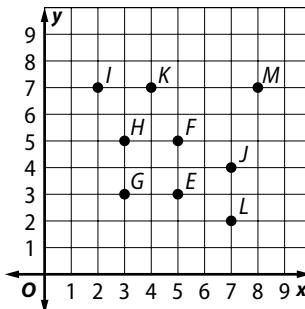
16. Which relation has a range of {0, 3, 5, 7}?

   F. {(2, 0), (2, 3), (2, 5), (2, 7)}   **H.** {(1, 3), (3, 1), (0, 5), (1, 8)}

   G. {(1, 6), (2, 1), (5, 6), (6, 4)}   **J.** {(6, 2), (8, 3), (5, 4), (8, 5)}

16. ____**F**____

For Exercises 17 and 18, what step in the four-step plan for problem solving relates to each of these questions?

17. What facts do I know?

   A. Understand   **C.** Solve

   B. Plan   **D.** Check

17. ____**A**____

18. Is my answer close to my estimate?

   F. Understand   **H.** Solve

   G. Plan   **J.** Check

18. ____**J**____

For Exercises 19–21, refer to the table.

x	0	2	4	6
y	0	24	48	72

19. Which ordered pair would appear in a graph of the data?

   A. (0, 2)   **B.** (4, 48)   **C.** (2, 4)   **D.** (24, 2)

19. ____**B**____

20. Which rule represents the data in the table?

   F. $x + 12$ **G.** $12 \cdot x$ **H.** $12 - x$ **J.** $x \div 12$

20. ____**G**____

21. What is the domain of the data?

   A. {0, 24, 48, 72}   **C.** {0, 2, 4, 6}

   B. {0}   **D.** {72, 0}

21. ____**C**____

22. The sum of two consecutive even integers is 30. What are the two integers?

   F. 0 and 30   **G.** 14 and 16   **H.** 16 and 18   **J.** 15 and 15

22. ____**G**____

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