NAME _____ DATE _____ PERIOD _____

Chapter 8 Test, Form 1

SCORE _____

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

1. Find $(2a - 5) - (3a + 1)$.
A $5a + 6$ **B** $a - 4$ **C** $-a - 6$ **D** $-a - 4$
1. C

2. Find $3m^2(2m^2 - m)$.
F $5m^4 - 3m^3$ **G** $6m^4 - 3m^2$ **H** $5m^4 - 3m$ **J** $6m^4 - 3m^3$
2. J

3. Simplify $3(x^2 + 2x) - x(x - 1)$.
A $4x^2 + x$ **B** $2x^2 + 7x$ **C** $2x^2 + 3x$ **D** $2x^2 + 5x$
3. B

4. Find $(2n - 3)(n + 4)$.
F $3n + 1$
G $2n^2 + 5n - 12$
H $2n^2 - 12$
J $2n^2 + 11n + 1$
4. G

5. Factor $xy + 3x - 2x^2$ completely.
A $x(y + 3 - 2x)$
B $(2x - 3y)(y + x)$
C $x(y + 3) + 2x$
D $y(x + 3x - 2x^2)$
5. A

6. Solve $b(b + 17) = 0$.
F $\left\{0, \frac{1}{17}\right\}$ **G** $\{-17, 0\}$ **H** $\{0, 17\}$ **J** $\{17\}$
6. G

7. Factor $m^2 + 13m + 42$.
A $(m + 1)(m + 13)$
B $(m + 6)(m + 7)$
C $(m + 10)(m + 3)$
D $(m - 6)(m - 7)$
7. B

8. Find $(3y - 1)^2$.
F $6y^2 - 6y + 1$
G $9y^2 - 6y + 1$
H $9y^2 - 3y + 1$
J $9y^2 - 6y - 1$
8. G

9. The area of a rectangle is $(y^2 - 8y + 15)$ square inches. Which expression represents a possible length for the rectangle?
A $(y + 5)$
B $(y - 2)$
C $(y - 15)$
D $(y - 3)$
9. D

10. Solve $3(2n - 6) = -4(n - 3)$.
F 3
G $\frac{3}{5}$
H 6
J $1\frac{4}{5}$
10. F

11. Solve $(3n - 9)(n + 7) = 0$.
A $\{-7, 3\}$ **B** $\{7, -3\}$ **C** $\{-7, -3\}$ **D** $\{7, 3\}$
11. A

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Chapter 8 Test, Form 1 *(continued)*

12. Factor $4m^2 - 25$.

F $(2m + 5)(2m + 5)$ **H** $(2m - 5)(2m - 5)$
G $(2m + 5)(2m - 5)$ **J** prime

12. G

13. A square is changed into a rectangle by increasing the length of the square by 5 units and increasing the width by 3 units. Which expression represents the area of the resulting rectangle in square units?

A $x^2 + 8x + 15$ **B** $x^2 + 15$ **C** $2x + 8$ **D** $2x + 15$

13. A

14. Solve $64y^2 = 25$ by factoring.

F $\left\{\frac{8}{5}\right\}$ **G** $\left\{\frac{5}{8}\right\}$ **H** $\left\{-\frac{8}{5}, \frac{8}{5}\right\}$ **J** $\left\{-\frac{5}{8}, \frac{5}{8}\right\}$

14. J

15. Which of the following polynomials shows the terms of $x^2 + 5x^3 - 4 - 2x$ arranged in standard form?

A $5x^3 - 2x + x^2 - 4$ **C** $5x^3 - 4 - 2x + x^2$
B $-4 - 2x + x^2 + 5x^3$ **D** $5x^3 + x^2 - 2x - 4$

15. D

16. The area of a circle is given by $(\pi k^2 - 12\pi k + 36\pi)$ square inches. What is the radius of the circle?

F $k + 3$ **G** $k + 4$ **H** $k - 6$ **J** $k - 12$

16. H

17. Find $(2x - 5)(2x + 5)$.

A $4x$ **B** $4x^2 - 25$ **C** $4x^2 - 20x - 25$ **D** $4x^2 + 25$

17. B

18. Solve $4x^2 - 3x = 0$.

F $\left\{-\frac{3}{4}, 0\right\}$ **G** $\{0, 0\}$ **H** $\left\{\frac{3}{4}, 0\right\}$ **J** $\left\{\frac{4}{3}, 0\right\}$

18. H

19. Factor $36xy^2 - 48x^2y$.

A $12xy(3y - 4x)$ **B** $12x^2y(3y - 4x)$ **C** $12xy^2(3y - 4x)$ **D** $12x^2y^2(3y - 4x)$

19. A

20. FALL Diego drops his camera as he climbs a hill and it falls to the ground 256 feet below. The distance d that the camera falls in t seconds is given by the equation $d = 16t^2$. How long does it take the camera to hit the ground?

F 2 seconds **G** 4 seconds **H** 8 seconds **J** 16 seconds

20. G

Bonus The area of a rectangle is represented by $x^2 + 2x - 48$. The length of the rectangle is longer than the width. Write an expression to represent the length of the rectangle.

B. $x + 8$