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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. _____

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. _____

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. _____

4. Find $(2n - 3)(n + 4)$.

F $3n + 1$

H $2n^2 - 12$

G $2n^2 + 5n - 12$

J $2n^2 + 11n + 1$

4. _____

5. Factor $xy + 3x - 2x^2$ completely.

A $x(y + 3 - 2x)$

C $x(y + 3) + 2x$

B $(2x - 3y)(y + x)$

D $y(x + 3x - 2x^2)$

5. _____

6. Solve $b(b + 17) = 0$.

F $\left\{0, \frac{1}{17}\right\}$

G $\{-17, 0\}$

H $\{0, 17\}$

J $\{17\}$

6. _____

7. Factor $m^2 + 13m + 42$.

A $(m + 1)(m + 13)$

C $(m + 10)(m + 3)$

B $(m + 6)(m + 7)$

D $(m - 6)(m - 7)$

7. _____

8. Find $(3y - 1)^2$.

F $6y^2 - 6y + 1$

H $9y^2 - 3y + 1$

G $9y^2 - 6y + 1$

J $9y^2 - 6y - 1$

8. _____

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

A $(y + 5)$

C $(y - 15)$

B $(y - 2)$

D $(y - 3)$

9. _____

10. Solve $3(2n - 6) = -4(n - 3)$.

F 3

G $\frac{3}{5}$

H 6

J $1\frac{4}{5}$

10. _____

11. Solve $2x^2 - 5x - 3 = 0$.

A $\left\{-\frac{1}{2}, 3\right\}$

B $\left\{\frac{1}{2}, -3\right\}$

C $\left\{\frac{1}{2}, 3\right\}$

D $\left\{-\frac{1}{2}, -3\right\}$

11. _____

8

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. _____

13. A square can be 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 rectangle in square units?

A $x^2 + 8x + 15$

B $x^2 + 15$

C $2x + 8$

D $2x + 15$

13. _____

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. _____

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. _____

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. _____

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

A $4x$

B $4x^2 - 25$

C $4x^2 - 20x - 25$

D $4x^2 + 25$

17. _____

18. Solve $2x^2 + 12x = -18$.

F $\{-3\}$

G $\{3\}$

H $\{-3, 3\}$

J $\{-9\}$

18. _____

19. Find two different integers such that the square of the integer is 12 less than seven times the integer.

A 3 and 4

B -3 and 4

C -4 and 3

D -3 and -4

19. _____

20. **GEOMETRY** The length of a rectangle is 5 centimeters more than the width. The area of the rectangle is 36 square centimeters. What is the length?

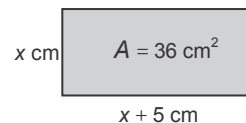
F 4 cm

G 9 cm

H 14 cm

J 26 cm

20. _____

**Bonus** The sum of the squares of two consecutive odd integers is 74. Find the two integers.

B: _____