

7.1-7.4 Test Algebra 1

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Find the degree of the monomial.

1. $4q^2rs^6$
- | | |
|-------|------|
| a. 6 | c. 9 |
| b. 13 | d. 4 |

Find the sum.

2. $(y + 5) + (3y - 9)$
- | | |
|-------------|---------------|
| a. $4y + 5$ | c. $-2y + 14$ |
| b. $6y - 6$ | d. $4y - 4$ |

Find the difference.

3. $(12t^2 - 2t^4 + 8t) - (2 + 7t^2 - 6t)$
- | | |
|-----------------------------|-----------------------------|
| a. $-2t^4 + 5t^2 + 14t + 2$ | c. $-2t^4 + 5t^2 + 14t - 2$ |
| b. $-2t^4 + 5t^2 + 2t - 2$ | d. $-9t^4 + 18t^2 + 6t$ |

Find the product.

4. $(m - 4)(m + 3)$
- | | |
|-------------------|--------------------|
| a. $m^2 - m - 12$ | c. $m^2 - 4m - 12$ |
| b. $m^2 - 12$ | d. $m^2 - m + 12$ |
5. $(6c - 3)(5c - 4)$
- | | |
|-----------------------|-----------------------|
| a. $30c^2 - 39c + 12$ | c. $30c^2 - 39c - 12$ |
| b. $30c^2 + 12$ | d. $30c^2 - 15c + 12$ |
6. $(x - 3)(x^2 - 8x + 2)$
- | | |
|--------------------------|----------------------------|
| a. $x^3 - 8x^2 + 2x$ | c. $x^3 - 11x^2 + 26x - 6$ |
| b. $x^3 - 8x^2 + 2x - 6$ | d. $x^3 - 11x^2 + 26x$ |
7. $(b - 9)(b + 9)$
- | | |
|---------------|---------------------|
| a. $b^2 - 81$ | c. $b^2 - 18b - 81$ |
| b. $b^2 + 81$ | d. $b^2 + 18b - 81$ |
8. $(2x + y)(2x - y)$
- | | |
|-----------------|-----------------------|
| a. $4x^2 + y^2$ | c. $4x^2 + 4xy - y^2$ |
| b. $4x^2 - y^2$ | d. $4x^2 + xy - y^2$ |

Solve the equation.

9. $z(z + 9)(4z + 2) = 0$

a. $z = 0, z = -9, z = -\frac{1}{2}$

b. $z = 0, z = 9, z = \frac{1}{2}$

c. $z = 0, z = -2$

d. $z = 0, z = -\frac{1}{9}$

Factor the polynomial completely.

10. $6z^2 - 42z$

a. $6(z^2 - 7z)$

b. $6z(z - 42)$

c. $6z(z - 7)$

d. $6(z - 7)$

Short Answer

Find the sum.

11. $(3p^2 + 3p - 2) + (-6p^2 + 5p - 5)$

Find the difference.

12. $(2x^2 + 6x - 11) - (5x^2 - x + 7)$

Find the product.

13. $(d - 3)(d^2 + 5d - 1)$

14. $(9t - 7)(5t + 9)$

15. $(9f + 10)^2$

Solve the equation.

16. $(1 + 4p)(4p - 1)(p + 2) = 0$

17. $16m^2 + 8m = 0$

18. $4n^2 - 18n = 6n$

19. $11n^2 = -27n$

Factor the polynomial completely.

20. $21y^3 + 49y^2$

7.1-7.4 Test Algebra 1 Answer Section

MULTIPLE CHOICE

1. C
2. D
3. C
4. A
5. A
6. C
7. A
8. B
9. A
10. C

SHORT ANSWER

11. $-3p^2 + 8p - 7$
12. $-3x^2 + 7x - 18$
13. $d^3 + 2d^2 - 16d + 3$
14. $45t^2 + 46t - 63$
15. $81f^2 + 180f + 100$
16. $p = -\frac{1}{4}, p = \frac{1}{4}, p = -2$
17. $m = 0, m = -\frac{1}{2}$
18. $n = 0, n = 6$
19. $n = 0, n = -\frac{27}{11}$
20. $7y^2(3y + 7)$