

Add or Subtract Polynomials 3

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Add and write the resulting polynomial in descending order of degree.

1) $(-3 + 3n^5 + 6n^3) + (7n^5 + 5n^3 - 3)$ 1) _____
 A) $15n^8$ B) $10n^5 + 11n^3 - 6$ C) $10 + 11n^5 - 6n^3$ D) $4n^5 + 8n^3 + 3$

2) $(8x^8 - 9x^3 + 3x^2 + 9) + (4x^7 + 6x^3 - 2x)$ 2) _____
 A) $8x^8 + 4x^7 + 3x^3 + 3x^2 - 2x + 9$ B) $12x^8 - 3x^3 + 3x^2 - 2x + 9$
 C) $12x^8 - 15x^3 + 3x^2 - 2x + 9$ D) $8x^8 + 4x^7 - 3x^3 + 3x^2 - 2x + 9$

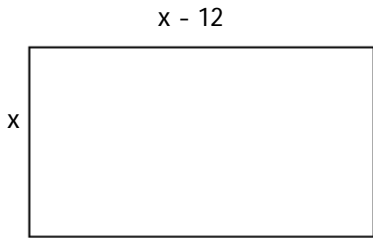
Add.

3) $(-7mn + 8mn^2 - 8m^2n^2) + (10m^2n + 2m^2n^2 - 3mn)$ 3) _____
 A) $-4mn + 8mn^2 + 10m^2n - 6m^2n^2$ B) $-10mn + 18m^2n - 6m^2n^2$
 C) $2m^2n^2$ D) $-6m^2n^2 + 10m^2n + 8mn^2 - 10mn$

4) $(7x^3y^3 + 8x^2y^2 - x^2y + xy^2 + 2x + 3) + (x^3y^3 - x^2y^2 + x^2y + 2x - 6)$ 4) _____
 A) $8x^3y^3 + 9x^2y^2 + x^2y + 4x - 3$ B) $8x^3y^3 + 8x^2y^2 + x^2y + 3$
 C) $8x^3y^3 + 7x^2y^2 + xy^2 + 4x - 3$ D) $8x^3y^3 + 7x^2y^2 + 2xy^2 - 3$

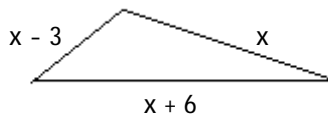
Write an expression for the perimeter in simplest form.

5) 5) _____



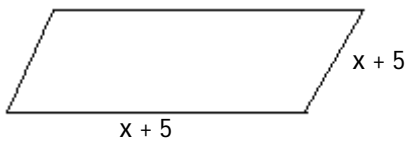
A) $2x^2 - 24x$ B) $4x + 24$ C) $4x - 24$ D) $x^2 - 12x$

6) 6) _____



A) $3x + 3$ B) $3x^3 + 18$ C) $3x + 9$ D) $3x + 5$

7) 7) _____



A) $4x + 10$ B) $4x + 20$ C) $x^2 + 10x + 25$ D) $2x + 10$

Subtract and write the resulting polynomial in descending order of degree.

8) $(12p^2 + 15p + 3) - (2p^2 + 17p - 2)$ 8) _____
 A) $10p^2 + 2p - 5$ B) $10p^2 - 2p + 5$ C) $10p^2 - 2p + 1$ D) $10p^4 - 2p^2 + 5$

9) $(10n + 4n^7 - 5n^6) - (11n^6 + 7n^7 - 18n)$ 9) _____
 A) $-3n^7 + 2n^6 - 8n$ B) $9n^{14}$
 C) $-3n^7 - 16n^6 - 8n$ D) $-3n^7 - 16n^6 + 28n$

Subtract.

10) $(r^3 - 6rs + 6s^2) - (3r^3 + rs - 4s^2)$ 10) _____
 A) $-2r^3 - 7rs + 10s^2$ B) $-2r^3 - 5rs + 10s^2$
 C) $-3r^3 - 6rs + 2s^2$ D) $-2r^3 - 7rs + 2s^2$

11) $(7w^4 - 3wz + 8wz^2) - (3w^4 + 2wz - 6wz^2)$ 11) _____
 A) $4w^8 - 5w^2z^2 + 14w^2z^4$ B) $10w^4 + 5wz + 14wz^2$
 C) $4w^4 - 5wz + 14wz^2$ D) $4w^4 - 5w^2z^2 + 14wz^2$

12) $(6x^3y^3 + 5x^2y^2 - x^2y + xy^2 + 3x + 2) - (-x^3y^3 + x^2y^2 - x^2y - 3x + 4)$ 12) _____
 A) $7x^3y^3 + 4x^2y^2 + xy^2 + 6x - 2$ B) $7x^3y^3 + 6x^2y^2 - 2x^2y + xy^2 + 6$
 C) $7x^3y^3 + 6x^2y^2 + x^2y + 6x - 2$ D) $7x^3y^3 + 4x^2y^2 + 2xy^2 - 2$

Solve the problem.

13) A company produces three sizes of a dog house, small, medium, and large. The small dog house sells for \$80, the medium size for \$110, and the large for \$140. The small dog houses cost \$50 each to make, medium \$70 each, and large \$79 each. Let s represent the number of small size dog houses, m represent the number of medium size dog houses and L represent the number of large size dog houses. Write an expression in simplest form for the net profit. 13) _____
 A) $30s + 40m + 61L$ B) $-28s - 43m - 76L$
 C) $28s + 43m + 76L$ D) $-30s - 40m - 61L$

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Provide an appropriate response.

14) Find and explain the mistake; then work the problem correctly. 14) _____
 $(2x^3 - 3x^2 + 5x - 1) + (3x^3 - 3x^2 - 2x + 4) = 5x^3 + 6x^2 + 3x + 3$

15) Find and explain the mistake(s); then work the problem correctly. 15) _____
 $(2x^3 - 2x^2 + 5x - 1) - (8x^3 - 10x^2 - 2x + 4) = -6x^3 - 8x^2 + 3x + 3$

Answer Key

Testname: ADDING AND SUBTRACTING POLYNOMIALS3

- 1) B
- 2) D
- 3) D
- 4) C
- 5) C
- 6) A
- 7) B
- 8) B
- 9) D
- 10) A
- 11) C
- 12) A
- 13) A
- 14) Explanations will vary. The correct answer is $5x^3 - 6x^2 + 3x + 3$
- 15) Explanations will vary. The correct answer is $-6x^3 + 8x^2 + 7x - 5$