Adding and Subtracting Polynomials 1

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) $(8x + 4) + (-11x + 5)$ 1) _____

A) $19x + 9$ B) $12x - 6$ C) $6x$ D) $-3x + 9$

2) $(4 + 9x^5 + 6x^7 + 8x^6) + (8x^6 + 6x^5 + 7 + 4x^7)$ 2) _____

A) $10x^{14} + 16x^{12} + 15x^{10} + 11$ B) $41x^{36} + 11$

C) $12x^7 + 12x^6 + 13x^5 + 12$ D) $10x^7 + 16x^6 + 15x^5 + 11$

Add.

3) $(19s + 11t) + (14t - 8s)$ 3) _____

A) $11s + 25t$ B) $27s + 25t$ C) $36st$ D) $33s + 3$

4) $(a^2b^2 - a^2b + 8ab^2 + 6ab + 4a^2b^2c^2) + (a^2b^2 + a^2b - 6ab + 4a^2b^2c^2)$ 4) _____

A) $8a^2b^2c^2 + 2a^2b^2 + 2a^2b + 8ab^2 + 12ab$ B) $8a^2b^2c^2 + 2a^2b^2 + 2a^2b + 8ab^2$

C) $8a^2b^2c^2 + 2a^2b^2 + 8ab^2$ D) $8a^2b^2c^2 + a^2b^2$

5) $(-3x^7 - x^4y^3 + x^3y^4 + 6y^7) + (6x^7 - x^4y^3 - 6x^2y^5 + 4xy^6 - 5y^7)$ 5) _____

A) $3x^7 - 2x^4y^3 + x^3y^4 - 6x^2y^5 + 4xy^6 + y^7$ B) $3x^7 + x^3y^4 - 6x^2y^5 + 4xy^6 - y^7$

C) $3x^7 + 2x^4y^3 + x^3y^4 + 6x^2y^5 - 4xy^6 - y^7$ D) $3x^7 - 2x^4y^3 + x^3y^4 + y^7$

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

6) $(8a^5 + 10a^3) - (13a^5 - 7a^3)$ 6) _____

A) $21a^5 + 3a^3$ B) $-5a^5 + 3a^3$ C) $12a^8$ D) $-5a^5 + 17a^3$

7) $(4n^5 + 12n^4 - 2) - (20n^4 + 7n^5 - 5)$ 7) _____

A) $-3n^5 - 8n^4 - 7$ B) $-3n^5 + 19n^4 - 7$ C) $-8n^9$ D) $-3n^5 - 8n^4 + 3$

8) $(8x^4 + 8x^6 + 3 - 3x^5) - (-2 + 9x^5 + 2x^6 + 4x^4)$ 8) _____

A) $6x^6 + 6x^5 + 12x^4 + 1$ B) $10x^6 + 6x^5 + 12x^4 + 1$

C) $6x^6 - 12x^5 + 4x^4 + 5$ D) $10x^6 + 6x^5 + 12x^4 + 5$

Subtract.

9) $(r^3 - 6rs + 6s^2) - (3r^3 + rs - 4s^2)$ 9) _____

A) $-3r^3 - 6rs + 2s^2$ B) $-2r^3 - 7rs + 2s^2$

C) $-2r^3 - 7rs + 10s^2$ D) $-2r^3 - 5rs + 10s^2$

10) $(3a^3b^5 - 5a^4b^2 + 9ab^3 - 9ab + 14) - (12b^5a^3 - a^4b^2 + 11ab^3 - 3)$ 10) _____

A) $-6a^3b^5 - 7a^4b^2 - 20ab^3 - 9ab + 11$ B) $-9a^3b^5 - 4a^4b^2 - 2ab^3 - 9ab + 17$

C) $-9a^3b^5 - 4a^4b^2 + 2ab^3 + 9ab + 15$ D) $9a^3b^5 - 4a^4b^2 - 20ab^3 - 8ab + 11$

Math Connections
Valencia College
Solve the problem.

11) A company produces two sizes of a dog house, large and small. If L represents the number of large dog houses and S represents the number of small dog houses, then the polynomial 230L + 160S + 100 describes the revenue from the sale of the dog houses. The polynomial 170L + 130S + 555 describes the cost of producing the dog houses. Write an expression in simplest form for net profit from the sale of the dog houses. 11) _____

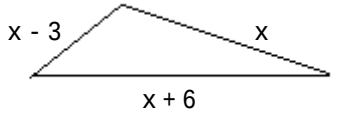
A) -60L - 30S + 455
B) 400L + 290S + 655
C) 60L + 30S - 455
D) 40L + 32S - 450

12) 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 represent the number of large size dog houses. Write an expression in simplest form for the net profit. 12) _____

A) 30s + 40m + 61L
B) -30s - 40m - 61L
C) -28s - 43m - 76L
D) 28s + 43m + 76L

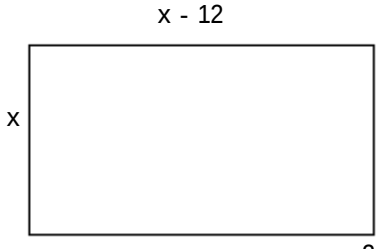
Write an expression for the perimeter in simplest form.

13) 13) _____



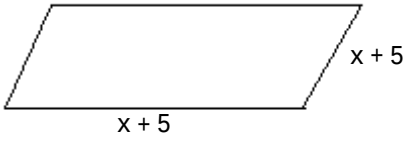
A) 3x + 3
B) 3x + 5
C) $3x^3 + 18$
D) 3x + 9

14) 14) _____



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

15) 15) _____



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

Answer Key
Testname: ADDING AND SUBTRACTING POLYNOMIALS1

1) D
2) D
3) A
4) C
5) A
6) D
7) D
8) C
9) C
10) B
11) C
12) A
13) A
14) C
15) B