

NAME: _____

UNIT 4 • EXTENDING THE NUMBER SYSTEM
Lesson 2: Operating with Polynomials

Assessment

Progress Assessment

Circle the letter of the best answer.

1. What is the result of $(x^2 - 6) + (3x^2 + 4)$?
a. $4x - 10$ c. $x^2 - 2$
b. $4x^2 + 10$ d. $4x^2 - 2$

2. What is the result of $(5x + 2) - (x^3 + x^2 - 9)$?
a. $4x^3 + x^2 + 11$ c. $x^3 + x^2 + 5x - 7$
b. $-x^3 - x^2 + 5x + 11$ d. $-x^2 + 5x - 11$

3. What is the result of $(8x^2 + 7x - 2) - (x^2 - 3x + 1)$?
a. $7x^2 + 10x - 3$ c. $8x^2 + 4x - 1$
b. $7x^2 + 4x - 3$ d. $8x^2 + 10x - 2$

4. What is the result of $(x - 12)(3x + 4)$?
a. $3x^2 - 48$ c. $3x^2 - 36x + 48$
b. $x^2 - 32x - 48$ d. $3x^2 - 32x - 48$

5. What is the result of $(-x^3 + x^2 + 2)(5x + 2)$?
a. $-5x^4 - 2x^3$ c. $-5x^4 + 3x^3 + 2x^2 + 10x + 4$
b. $-5x^4 + 5x^3 + 10x$ d. $-x^3 + 5x^2 + 10x + 4$

6. What is the result of $(9x^3 + 4x^2 + 3) + (-x^3 + 2x^2 - 16)$?
a. $8x^3 + 6x^2 - 13$ c. $16x - 13$
b. $10x^3 + 6x^2 + 19$ d. $10x^3 + 2x^2 + 19$

7. What is the result of $(-5x + 8) + (x^2 - 10x)$?
a. $x^2 - 15x + 8$ c. $x^2 + 5x + 8$
b. $-6x - 2$ d. $-x^2 - 15x$

continued

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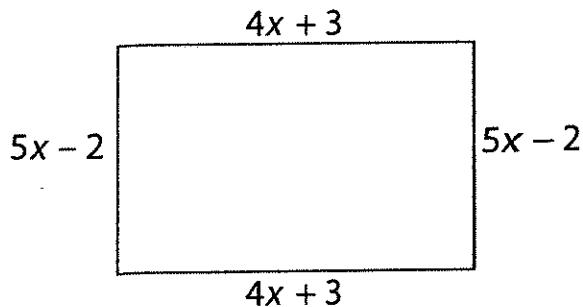
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8. What is the result of $(x^3 - 10x^2) - (3x^3 + 10x^2 - 9)$?
- a. $4x^3 - 9$ c. $-4x^3 + 9$
 b. $-2x^3 - 20x^2 + 9$ d. $-24x + 9$
9. What is the result of $(x^3 - 2x^2)(x + 2)$?
- a. $x^4 + 2x^3$ c. $x^4 - 4x^2$
 b. $x^4 - 2x^2 + 2x^3$ d. $x^4 - 4x^3 - 4x^2$
10. What is the result of $(-4x^2 + 1)(x^2 - 3x + 6)$?
- a. $4x^4 + 12x^3 + 25x^2 - 3x + 6$ c. $-4x^2 - 3x + 6$
 b. $-4x^4 + 12x^3 - 23x^2 - 3x + 6$ d. $x^2 - 3x + 6$

Use the given information and the diagram that follows to answer the questions.

11. The perimeter of a rectangle is the sum of the side lengths: perimeter = $2l + 2w$, where l is the rectangle's length and w is the rectangle's width. The area of a rectangle is the product of the side lengths: area = lw .



- a. What is the perimeter of the rectangle in simplest form?
 b. What is the area of the rectangle in simplest form?