1. What is the result of $(x^2 - 10x) - (-5x^2 + x)$?

    a. $-4x^2 - 9x$

    b. $-4x^2 - 11x$

    c. $6x^2 + 9x$

    d. $6x^2 - 11x$

2. What is the result of $(-x + 2)(x + 3)$?

    a. $-x^2 - x + 6$

    b. $x^2 + 5x + 6$

    c. $-x^2 + 6$

    d. $x^2 - 6$

3. What is the result of $(x^2 + 1)(-x^3 - 4x + 2)$?

    a. $x^5 - 5x^3 + 2x^2 + 4x + 2$

    b. $-x^5 - 5x^3 + 2x^2 - 4x + 2$

    c. $-x^4 - 4x^3 + 2x^2$

    d. $-x^6 - 4x^4 + 2x^2 + 2$

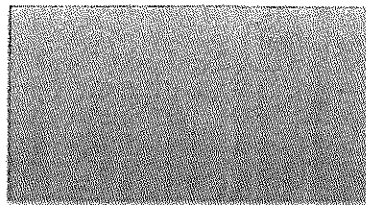4. The length of a rectangular garden is 15 feet less than 3 times the width. What is the area of the garden?

    a. 4w -15

    b. 3w² -15

    c. 3w² - 15w

    d. 8w -30

    w

    3w -15

5. Which of the following is equivalent to (2x +1)² ?

    a. 4x²+1

    b. 4x + 2

    c. 4x² + 4x +1

    d. 2x² + 4x

6. What is the result of $(5x + 2) - (x^3 + x^2 - 9)$?

    a. $4x^3 + x^2 + 11$

    b. $-x^3 - x^2 + 5x + 11$

    c. $x^3 + x^2 + 5x - 7$

    d. $-x^2 + 5x - 11$

7. The area of a square garden is 173 square feet. Estimate the side length of the garden.

   A. 16 ft
   B. 11 ft
   C. 15 ft
   D. 13 ft

8. Which of the following is an example of the sum of a rational and an irrational number being irrational?

   a. $6 + 1/2$
   b. $\sqrt{3} + \sqrt{5}$
   c. $\sqrt{16} + \sqrt{2}$
   d. $\sqrt{5} + \pi$

9. Which of the following is an example of the product of two irrational numbers being rational?

   a. $\sqrt{4} \cdot \sqrt{49}$
   b. $\sqrt{3} \cdot \sqrt{3}$
   c. $\pi \cdot \pi$
   d. $\sqrt{4} \cdot \sqrt{3}$

10. Multiply. Write the product in simplest form. $5\sqrt{8} \cdot 7\sqrt{3}$

    A. $35\sqrt{5}$
    B. $70\sqrt{6}$
    C. $140\sqrt{6}$
    D. $-2\sqrt{5}$

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 $= lw$.
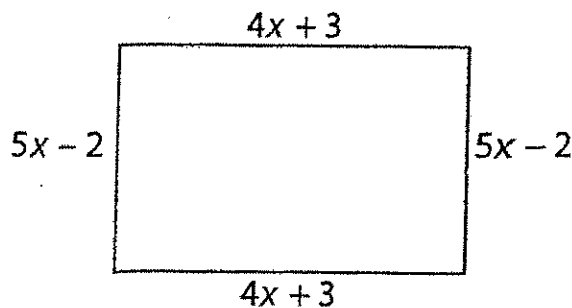
   a. What is the perimeter of the rectangle in simplest form?

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