

2.2 Adding Polynomials

Period _____

Simplify each expression by combining like terms, put your answers in standard form. (Add)

1) $(3r^3 - 3r) + (r^3 + 5r)$

2) $(x - 3) + (4 - 2x)$

3) $(3n^3 + 4n^2) + (3n^2 - 4n^3)$

4) $(x + 2) + (2x - 3)$

5) $(4n^3 - 3n^2) + (4n^2 + 2n^3)$

6) $(2x^2 + 2x^3) + (4x^2 + 2x^3)$

7) $(1 + 4x) + (5x^2 + 3)$

8) $(2b^3 - 4b^2) + (5b + 4b^3)$

9) $(-11x^4 + 7x^5 - 4x^2) + (2x^2 + 3x^4 - 8x^5)$

10) $(14v^2 - 7v + 11) + (-10v - 10v^5 + 6)$

11) A pool is being filled with a large water hose. The height of the water in a pool is determined by $8g^2 + 3g - 4$. Previously, the pool had been filled with a different hose. Then, the height was determined by $6g^2 + 2g - 1$. Write an expression that determines the height of the water in the pool if both hoses are on at the same time. Simplify the expression.

12) The length of a rectangle is represented by $4a + 3b$, and its width is represented by $3a - 2b$. Write a polynomial for the perimeter of the rectangle.