

Name: _____

Operations with Polynomials

Exercise 1: Find the product.

1) $(x+9)(x-2)$

2) $(x-15)(x+10)$

3) $(x+4)(x-20)$

4) $(x-7)(x-8)$

5) $(x-4)(x+4)$

6) $(7x^2 - 5) \cdot (3x^3 + 1)$

7) $(x^2 + 3) \cdot (x^2 - 3)$

8) $(x^2 - 5) \cdot (x^2 + 5)$

9) $(x^2 + 2) \cdot (3x^2 + 1)$

10) $(x^2 + 4) \cdot (3x^2 + 2)$

11) $(x^2 + 3x - 4) \cdot (x^2 - 3)$

12) $(x^2 + x - 2) \cdot (x^2 + 3)$

13) $(x^2 - 2x - 1) \cdot (x^2 + 4)$

14) $(x^2 + 3x + 9) \cdot (x^2 + 2)$

15) $(-x^2 - x + 2) \cdot (-x^2 - 3)$

16) $(7x^2 + 4x - 5) \cdot (3x^3 - 2x^2 + 3x + 1)$

17) $(7x^2 + 3x - 4) \cdot (-x^2 + x + 1)$

18) $(x^7 - 4x^4 + 2x)(6x^5 - 3x^4 - 5x)$

19) $(-2x^4 + 5x^3 - 3x)(x^5 + 2x^3 - x)$

20) $(5x - 2x^2 + 8x^4)(2 + x - 4x^3)$

21) $(0.07x^2 + 4.3x - 4.5) \cdot (5.3x^3 + 2.8x^2 + 1.7)$

22) $(0.9x^2 + 2.3x + 8.7) \cdot (5.2x^3 + 1.2x^2 + 1.5)$

Exercise 2: Use the result of part 1 to find the answer of part 2.

1) Expand: $x^2 - (x-3)(x+3)$

2) Without performing the operation, but using the result of 1), give the result of:
 $(5,640)^2 - (5,643)(5,637)$