

WORKSHEET **MULTIPLYING TWO POLYNOMIALS**

Follow the steps below to multiply two polynomials:

1. Use the distributive property to find the product of the first term of the first polynomial and every term of the second polynomial.
2. Use the distributive property to write the product of the second term of the first polynomial and every term of the second polynomial. Continue this process until all the products of all the terms of the first polynomial are written.
3. Combine similar terms.

EXAMPLE

- Multiply $(3x^2 - 4)(2x^2 + 5x - 1)$.
- $3x^2$ is the first term of the first polynomial. Write the product of $3x^2$ and every term of the second polynomial. $3x^2(2x^2 + 5x - 1) = 6x^4 + 15x^3 - 3x^2$
- -4 is the second term of the first polynomial. Write the product of -4 and every term of the second polynomial. $-4(2x^2 + 5x - 1) = -8x^2 - 20x + 4$
- Combine similar terms. $6x^4 + 15x^3 - 3x^2 - 8x^2 - 20x + 4 = 6x^4 + 15x^3 - 11x^2 - 20x + 4$

DIRECTIONS: Multiply.

1. $(2x + 1)(4x^2 - 3x + 2)$
2. $(x + 2)(x^2 + 3x + 1)$
3. $(x - 3)(x^2 - x + 1)$
4. $(2x + 5)(x^2 - 3x + 4)$
5. $(3x - 2)(x^2 - 4x + 3)$
6. $(2x^2 - 1)(x^2 - 3x - 3)$
7. $(x^2 - 1)(x^2 - 3x + 1)$
8. $(x^3 - 4)(x^2 - 7x + 2)$
9. $(x^2 - x)(x^2 + 8x - 1)$