

Box Method - Multiplying Polynomials

Reminder: $x \cdot x =$

$x \cdot x^2 =$

$x^3 \cdot x^4 =$

Ex. 1

(monomial)(binomial)

$7x^2(4x^5 - 2x^3)$

You Try

(monomial)(trinomial)

$5n(3n^3 - n^2 + 8)$

Ex. 2

(binomial)(binomial)

$(2y + 8)(y - 3)$

Steps

(1) Draw a box.

Put one binomial on top.

Put one binomial at the left.

(2) Multiply the sides.

Put the product on the inside.

(3) Identify like terms.

(4) Combine like terms.

Write the simplified polynomial.

Ex. 3

(binomial)(binomial)

$(8b - 3)(9b - 2)$

You Try

(binomial)(binomial)

$(3a - 4)(7a + 6)$

Ex. 4

(binomial)(trinomial)
 $(2x - 5)(x^2 - 5x + 4)$

You Try

(binomial)(trinomial)
 $(2x - 3)(x^2 - 4x + 7)$

Ex. 5 - Application

A square painting is surrounded by a frame. The outside edges of the frame are x inches in length and there is a 3-inch border between the painting and the frame. What is the area of the border?

You Try - Application

A square painting is surrounded by a frame. The outside edges of the frame are x inches in length and there is a 5-inch border between the painting and the frame. What is the area of the border?