



Synthetic Division Setup - Final Polynomial from the Full Setup (with Hint)

1

$$\frac{x^3 - 5x^2 + 2x + 8}{(x + 4)}$$

-4	1	-5	2	8

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$2x^2 - 9x + 38 - \frac{144}{(x + 4)}$	$x^2 - 9x + 38 + \frac{144}{(x + 4)}$

2

$$\frac{x^4 + 4x^3 - 13x^2 - 64x - 48}{(x - 2)}$$

2	1	4	-13	-64	-48

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$x^3 + 6x^2 - x - 66 + \frac{180}{(x - 2)}$	$x^3 + 6x^2 - x - 66 - \frac{180}{(x - 2)}$

3

$$\frac{x^4 + 9x^3 + 26x^2 + 24x}{(x + 2)}$$

-2	1	9	26	24	0

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$x^4 + 7x^3 + 12x^2$	$2x^3 + 7x^2 + 12x$

4

$$\frac{x^4 - 3x^3 + 4x}{(x - 2)}$$

2	1	-3	0	4	0

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$x^3 - x^2 - 2x + \frac{1}{(x - 2)}$	$x^3 - x^2 - 2x$

5

$$\frac{x^3 - 8x^2 + 19x - 12}{(x - 4)}$$

4	1	-8	19	-12

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$x^2 - 4x + 3$	$x^2 - 4x + 3 + \frac{1}{(x - 4)}$

6

$$\frac{x^5 + 5x^4 + 8x^3 + 4x^2}{(x + 1)}$$

-1	1	5	8	4	0	0

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$x^4 + 4x^3 + 4x^2$	$2x^4 + 4x^3 + 4x^2$

7

$$\frac{x^4 - 4x^3 - 12x^2 + 64x - 64}{(x - 1)}$$

1	1	-4	-12	64	-64

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$2x^3 - 3x^2 - 15x + 49 - \frac{15}{(x - 1)}$	$x^3 - 3x^2 - 15x + 49 + \frac{15}{(x - 1)}$

8

$$\frac{x^3 + 7x^2 + 12x}{(x - 2)}$$

2	1	7	12	0

Using synthetic division to divide this polynomial by this binomial, what is the resulting quotient and remainder? Hint: The quotient's first term is one degree lower than the original polynomial, and the last bottom-row value is the remainder.

A	B
$x^2 + 9x + 30 + \frac{60}{(x - 2)}$	$2x^2 + 9x + 30 + \frac{60}{(x - 2)}$