



Synthetic Division Setup - Single Coefficient, In Order (with Hint)

1

$$\frac{x^3 - 5x^2 - 2x + 24}{(x - 4)}$$

4	?	-5	-2	24

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
1	9

2

$$\frac{x^4 - 8x^3 + 20x^2 - 16x}{(x - 0)}$$

0	1	-8	20	?	0

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
15	-16

3

$$\frac{x^4 + 9x^3 + 24x^2 + 16x}{(x + 1)}$$

-1	1	9	24	16	?

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
3	2

4

$$\frac{x^3 - 8x^2 + 20x - 16}{(x - 3)}$$

3	1	?	20	-16

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
8	-8

5

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

-1	1	3	1	-3	?

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
10	3

6

$$\frac{x^4 + 3x^3 - 16x^2 - 48x}{(x - 1)}$$

1	1	3	-16	-48	?

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
5	0

7

$$\frac{x^3 + 6x^2 + 9x + 4}{(x - 1)}$$

1	?	6	9	4

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
0	8

8

$$\frac{x^4 + 7x^3 + 12x^2 - 4x - 16}{(x + 1)}$$

-1	1	7	?	-4	-16

Using synthetic division to divide this polynomial by this binomial, which value goes in the highlighted box of the top row? Hint: Write the coefficients in order from the highest power of x to the lowest, using 0 for any missing term.

A	B
15	8