



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

1

$$\frac{27 - 9x - 3x^2 + x^3}{(x - 3)}$$

3	1	?	-9	27

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
7	4

2

$$\frac{27x - 9x^2 + x^4 - 3x^3}{(x - 2)}$$

2	1	?	-9	27	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
9	-3

3

$$\frac{-3x^2 - 5x^3 + x^4 + 45x - 54}{(x + 1)}$$

-1	1	-5	-3	?	-54

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
45	77

4

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

-4	1	?	0	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
7	10

5

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

-1	1	?	-1	-16	-12

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
4	1

6

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

4	1	?	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
14	5

7

$$\frac{-9x^2 - 9x^3 + x^4 + x^5}{(x - 0)}$$

0	1	1	-9	-9	?	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
7	8

8

$$\frac{-15x - 36 + 2x^2 + x^3}{(x - 0)}$$

0	1	2	-15	?

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
-36	32