



Synthetic Division Setup - All Coefficients, Random Order

1 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

$$\frac{3x^3 - 108x + 7x^4 - 63x^2 + x^5}{(x - 0)}$$

0	?	?	?	?	?	?

A	B	C																																																						
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0	-108	-43	3	7	1																																																			

2 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

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

1	?	?	?	?

A	B	C																																				
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2	2	-7	4																																			

3 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

$$\frac{-14x^2 - 48x + 3x^3 - 32 + x^4}{(x + 2)}$$

-2	?	?	?	?	?

A	B	C																																													
<table border="1"><tr><td>-32</td><td>-48</td><td>-14</td><td>3</td><td>1</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	-32	-48	-14	3	1											<table border="1"><tr><td>2</td><td>3</td><td>-14</td><td>-48</td><td>-32</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	2	3	-14	-48	-32											<table border="1"><tr><td>1</td><td>3</td><td>-14</td><td>-48</td><td>32</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	1	3	-14	-48	32										
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4 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

$$\frac{24 - 26x + x^5 + 25x^3 - 9x^4 - 15x^2}{(x + 1)}$$

-1	?	?	?	?	?	?

A	B	C																																																						
<table border="1"><tr><td>2</td><td>-9</td><td>25</td><td>-15</td><td>-26</td><td>24</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	2	-9	25	-15	-26	24													<table border="1"><tr><td>1</td><td>-9</td><td>25</td><td>-15</td><td>-26</td><td>-24</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	1	-9	25	-15	-26	-24													<table border="1"><tr><td>1</td><td>-9</td><td>25</td><td>-15</td><td>-26</td><td>24</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	1	-9	25	-15	-26	24												
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24	-26	-15	25	-9	1																																																			

5 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

$$\frac{x^4 + 26x - 6x^3 + 3x^2 - 24}{(x - 1)}$$

1	?	?	?	?	?

A	B	C																																													
<table border="1"><tr><td>1</td><td>-6</td><td>3</td><td>26</td><td>-24</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	1	-6	3	26	-24											<table border="1"><tr><td>2</td><td>-6</td><td>3</td><td>26</td><td>-24</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	2	-6	3	26	-24											<table border="1"><tr><td>1</td><td>-6</td><td>3</td><td>26</td><td>24</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	1	-6	3	26	24										
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-24	26	3	-6	1																																											

6 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

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

-2	?	?	?	?	?

A	B	C																																													
<table border="1"><tr><td>1</td><td>4</td><td>0</td><td>-16</td><td>16</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	1	4	0	-16	16											<table border="1"><tr><td>1</td><td>4</td><td>0</td><td>-16</td><td>-16</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	1	4	0	-16	-16											<table border="1"><tr><td>2</td><td>4</td><td>0</td><td>-16</td><td>-16</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>	2	4	0	-16	-16										
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-16	-16	0	4	1																																											

7 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

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

-3	?	?	?	?

A	B	C																																				
<table border="1"><tr><td>1</td><td>-3</td><td>-9</td><td>27</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	1	-3	-9	27									<table border="1"><tr><td>1</td><td>-3</td><td>-9</td><td>-27</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	1	-3	-9	-27									<table border="1"><tr><td>2</td><td>-3</td><td>-9</td><td>27</td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>	2	-3	-9	27								
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27	-9	-3	1																																			

8 Using synthetic division to divide this polynomial by this binomial, which set of values goes in the top row of the synthetic division grid?

$$\frac{12x^2 + x^5 - 13x^3}{(x - 0)}$$

0	?	?	?	?	?	?

A	B	C																																																						
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