

Complete the Pattern Puzzles – Answers

Date: _____

Rule: Each box must contain a single digit number. Study the examples, then try to predict the missing numbers in the exercise:

Examples 1:

pattern:	hint:	pattern:	hint:	pattern:	hint:																		
a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	1	1	1	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>2</td><td>3</td><td>3</td></tr></table>	1	2	3	3	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>9</td></tr></table>	9	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td><td>3</td><td>2</td><td>1</td></tr></table>	4	3	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0
1	1	1	1																				
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>7</td><td>9</td><td>1</td></tr></table>	5	7	9	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td></tr></table>	2	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>9</td><td>9</td><td>9</td><td>9</td></tr></table>	9	9	9	9	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>6</td></tr></table>	6	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>0</td><td>0</td><td>0</td></tr></table>	1	0	0	0	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td></tr></table>	1
5	7	9	1																				
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6																							
1	0	0	0																				
1																							

Exercise 1:

a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td><td>2</td><td>2</td><td>1</td></tr></table>	2	2	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td></tr></table>	7	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>7</td><td>7</td><td>7</td></tr></table>	7	7	7	7	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>8</td></tr></table>	8	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>5</td><td>5</td><td>5</td></tr></table>	5	5	5	5	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>5</td><td>4</td><td>4</td></tr></table>	1	5	4	4	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>8</td><td>6</td><td>5</td><td>1</td></tr></table>	8	6	5	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td><td>9</td><td>9</td><td>9</td></tr></table>	4	9	9	9	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td></tr></table>	1
1	5	4	4																				
4																							
8	6	5	1																				
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4	9	9	9																				
1																							

Now the way the hint works will be changed:

Examples 2:

a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	1	1	1	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>6</td></tr></table>	6	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>2</td><td>3</td><td>3</td></tr></table>	1	2	3	3	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td></tr></table>	1	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td><td>3</td><td>2</td><td>1</td></tr></table>	4	3	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0
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4	3	2	1																				
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>7</td><td>9</td><td>1</td></tr></table>	5	7	9	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>8</td></tr></table>	8	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>9</td><td>9</td><td>9</td><td>9</td></tr></table>	9	9	9	9	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>0</td><td>0</td><td>0</td></tr></table>	1	0	0	0	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>9</td></tr></table>	9
5	7	9	1																				
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9	9	9	9																				
4																							
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9																							

Exercise 2:

a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td><td>2</td><td>2</td><td>1</td></tr></table>	2	2	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>3</td></tr></table>	3	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>7</td><td>7</td><td>7</td></tr></table>	7	7	7	7	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td></tr></table>	2	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>5</td><td>5</td><td>5</td></tr></table>	5	5	5	5	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>5</td><td>4</td><td>6</td></tr></table>	1	5	4	6	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>8</td><td>6</td><td>5</td><td>1</td></tr></table>	8	6	5	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td><td>9</td><td>9</td><td>9</td></tr></table>	2	9	9	9	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td></tr></table>	1
1	5	4	6																				
4																							
8	6	5	1																				
0																							
2	9	9	9																				
1																							

The next set uses the same rules as #2 above, but the numbers are in base 8.

Examples 3:

a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>1</td><td>1</td><td>1</td></tr></table>	1	1	1	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>2</td><td>3</td><td>3</td></tr></table>	1	2	3	3	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td></tr></table>	7	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td><td>3</td><td>2</td><td>1</td></tr></table>	4	3	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>6</td></tr></table>	6
1	1	1	1																				
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1	2	3	3																				
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4	3	2	1																				
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>7</td><td>6</td><td>4</td></tr></table>	5	7	6	4	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td></tr></table>	2	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>7</td><td>7</td><td>7</td></tr></table>	7	7	7	7	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>0</td><td>0</td><td>0</td></tr></table>	1	0	0	0	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td></tr></table>	7
5	7	6	4																				
2																							
7	7	7	7																				
4																							
1	0	0	0																				
7																							

Exercise 3:

a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td><td>2</td><td>2</td><td>1</td></tr></table>	2	2	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td></tr></table>	1	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>7</td><td>7</td><td>5</td></tr></table>	7	7	7	5	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>6</td></tr></table>	6	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>5</td><td>5</td><td>5</td></tr></table>	5	5	5	5	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td><td>5</td><td>4</td><td>2</td></tr></table>	1	5	4	2	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>6</td><td>2</td><td>1</td></tr></table>	7	6	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	0	0	0	0	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0
1	5	4	2																				
4																							
7	6	2	1																				
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0	0	0	0																				
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Now we will change to base 12:

Exercise 4:

a	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>2</td><td>2</td><td>2</td><td>1</td></tr></table>	2	2	2	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td></tr></table>	5	b	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>6</td><td>7</td><td>6</td></tr></table>	7	6	7	6	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>A</td></tr></table>	A	c	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>5</td><td>5</td><td>5</td><td>5</td></tr></table>	5	5	5	5	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>4</td></tr></table>	4
2	2	2	1																				
5																							
7	6	7	6																				
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d	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>A</td><td>A</td><td>A</td><td>A</td></tr></table>	A	A	A	A	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>8</td></tr></table>	8	e	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>7</td><td>8</td><td>B</td><td>9</td></tr></table>	7	8	B	9	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>1</td></tr></table>	1	f	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>B</td><td>A</td><td>B</td><td>A</td></tr></table>	B	A	B	A	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>6</td></tr></table>	6
A	A	A	A																				
8																							
7	8	B	9																				
1																							
B	A	B	A																				
6																							
g	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>B</td><td>5</td><td>9</td><td>1</td></tr></table>	B	5	9	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>A</td></tr></table>	A	h	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>8</td><td>5</td><td>A</td><td>1</td></tr></table>	8	5	A	1	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td></tr></table>	0	i	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>0</td><td>B</td><td>B</td><td>B</td></tr></table>	0	B	B	B	<table border="1" style="display: inline-table; border-collapse: collapse;"><tr><td>3</td></tr></table>	3
B	5	9	1																				
A																							
8	5	A	1																				
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0	B	B	B																				
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