

## The use of the Excel file 'TakeAway'

The initial screen of TakeAway, after opening the file, shows the following information:

TakeAway																				
Take away set:	<input type="text" value="1"/>	<input type="text" value="4"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
length of set:	2																			
length period:	5																			
from position:	0 (the series for the period are underlined)																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
winning route:	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>

- The take-away set here is  $\{1, 4\}$ . These numbers can be replaced by other ones by filling in another number in that particular cell. The maximum amount of numbers is 7 and they all are not allowed to have a value more than 20.

After filling in any take-away set, the program provides you with the following information:

- *length of set* shows the amount of numbers. For  $\{1, 4\}$  that is 2.
- *length period* is the amount of 0-s and 1-s in the repeating block (the period). In TakeAway, this repeating block is underlined. For  $\{1, 4\}$  it is the block '0 1 0 1 1'
- *from position* this number shows the position from where the periodical block starts. For  $\{1, 4\}$  this is from position 0.

When you define any own take-away set, you start with the most-left cell. From there you fill the cells going to the right. If you need to delete a number from any cell, just go there and delete the number.

For take-away set  $\{5, 11, 19\}$ , you get the following information from TakeAway:

TakeAway																					
Take away set:	<input type="text" value="5"/>	<input type="text" value="11"/>	<input type="text" value="19"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
length of set:	3																				
length period:	8																				
from position:	10 (the series for the period are underlined)																				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
winning route:	0	0	0	0	0	1	1	1	1	1	<u>0</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>1</u>

- the length of the period is now 8 and the underlined (0 1 1 1 1 0 0) is the repeating block.
- the period starts from position 10 (the position number where the underlined block starts).