

Define $Z_n = \{0,1,2,\dots,n-1\}$

Define $a +_n b = (a+b) \bmod n = (a \bmod n) + (b \bmod n)$

Define $a \times_n b = (a \times b) \bmod n = (a \bmod n) \times (b \bmod n)$

Recall $a \bmod n = b$ if b is the remainder upon the division of a by n
 (e.g. $5 \bmod 3 = 2$; $14 \bmod 3 = 2$, think of “clock arithmetic”)

Fill in each of the following Cayley Tables

$(Z_4, +_4)$	0	1	2	3
0				
1				
2				
3				

(Z_4, \times_4)	0	1	2	3
0				
1				
2				
3				

$(Z_5, +_5)$	0	1	2	3	4
0					
1					
2					
3					
4					

(Z_5, \times_5)	0	1	2	3	4
0					
1					
2					
3					
4					

$(\mathbb{Z}_6, +_6)$	0	1	2	3	4	5
0						
1						
2						
3						
4						
5						

(\mathbb{Z}_6, \times_6)	0	1	2	3	4	5
0						
1						
2						
3						
4						
5						

$(\mathbb{Z}_7, +_7)$	0	1	2	3	4	5	6
0							
1							
2							
3							
4							
5							
6							

(\mathbb{Z}_7, \times_7)	0	1	2	3	4	5	6
0							
1							
2							
3							
4							
5							
6							