Measuring protocol for key generation – ALICE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Basis (+ or x)																		
Bit (0 or 1)																		

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Basis (+ or x)																		
Bit (0 or 1)																		

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Basis (+ or x)																
Bit (0 or 1)																

Generated Key:

_ _

Angle setting (reminder)	Basis +	Basis x
Bit 0	0°	-45°
Bit 1	90°	45°

Table for encryption of the message – Alice

Letter																				
Data Bit																				
Key Bit																				
Encrypted Bit																				

Data Bit = letter in binary form, 4 x 5 Bit

Measuring protocol for key generation – BOB

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Basis (+ or x)																		
Bit (0 or 1)																		

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Basis (+ or x)																			
Bit (0 or 1)																			

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Basis (+ or x)																
Bit (0 or 1)																

Generated Key:

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Reminder	transmitted	reflected
Basis + (=0°)	0	1
Basis x (=45°)	0	1

Table for decryption of the message – BOB

Received Bit																			
Key Bit																				
Data Bit																				
Letter																				

Basis selection – EVE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Basis (+ or x)																		

	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Basis (+ or x)																		

	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Basis (+ or x)																

Binary representation of the alphabet

A	0	0	0	0	0
B	0	0	0	0	1
C	0	0	0	1	0
D	0	0	0	1	1
E	0	0	1	0	0
F	0	0	1	0	1
G	0	0	1	1	0
H	0	0	1	1	1
I	0	1	0	0	0
J	0	1	0	0	1
K	0	1	0	1	0
L	0	1	0	1	1
M	0	1	1	0	0
N	0	1	1	0	1
O	0	1	1	1	0
P	0	1	1	1	1
Q	1	0	0	0	0
R	1	0	0	0	1
S	1	0	0	1	0
T	1	0	0	1	1
U	1	0	1	0	0
V	1	0	1	0	1
W	1	0	1	1	0
X	1	0	1	1	1
Y	1	1	0	0	0
Z	1	1	0	0	1

Binary Addition Table

0	1	0	1
+ 0	+ 0	+ 1	+ 1
= 0	= 1	= 1	= 0