

Learning Goals:

1. Describe BB84 quantum cryptographic protocol
2. Use vectors to describe states and measurements

Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
a	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
b	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	1
c	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	1	0	1
e	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	2	2	2	2
f																				
d																				

- Find f, d



Bit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
a	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	0
b	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	0	0	1	1
c	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	0	1	0	1
e	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	2	2	2	2
f	0	0/1	0	0/1	1	0/1	1	0/1	0/1	0	0/1	0	0/1	1	0/1	1	2	2	2	2
d	0	0/1	0/1	0/1	1	0/1	0/1	0/1	0/1	0/1	0/1	0	0/1	0/1	0/1	1	0	0/1	1	0/1

- Find f, d



Bit	1	2			5	6					11	12			15	16	17		19
a	0	0			0	0					1	1			1	1	0		0
b	0	0			1	1					0	0			1	1	0		1
c	0	0			0	0					1	1			1	1	0		0
e	0	1			0	1					0	1			0	1	2		2
f	0	0/1			1	0/1					0/1	0			0/1	1	2		2
d	0	0/1			1	0/1					0/1	0			0/1	1	0		1

- Find f, d