

1.) Coin - row problem

5, 1, 2, 10, 6, 2

$$C_N = \{c_1, c_2, c_3, \dots, c_n\}$$

F							
C							
	0	1	2	3	4	5	6
C		5	1	2	10	6	2
F	0	5	5				

So, calculating as per recurrence relation,

$$\begin{aligned}
 F(n) &= \max \{ \text{coins}[n] + F(n-2), F(n-1) \} \\
 &= \max \{ 1 + 0, 5 \} \\
 &= 5.
 \end{aligned}$$

	0	1	2	3	4	5	6
C		5	1	2	10	6	2
F	0	5	5	7			

$$F(3) = \max \{ 2+5, 5 \}$$

$$\Rightarrow 7$$

	0	1	2	3	4	5	6
C		5	1	2	10	6	2
F	0	5	5	7	15		

$$F(4) = \max \{ 10+5, 7 \}$$

$$\Rightarrow 15$$

	0	1	2	3	4	5	6
C		5	1	2	10	6	2
F	0	5	5	7	15	15	

$$F(5) = \max \{ 6+7, 15 \}$$

$$\Rightarrow 15$$

	0	1	2	3	4	5	6
C		5	1	2	10	6	2
F	0	5	5	7	15	15	

$$F(6) = \max \{ 2 + 15, 15 \}$$

$$\Rightarrow 17.$$

So, the Sum $\Rightarrow 17$ //