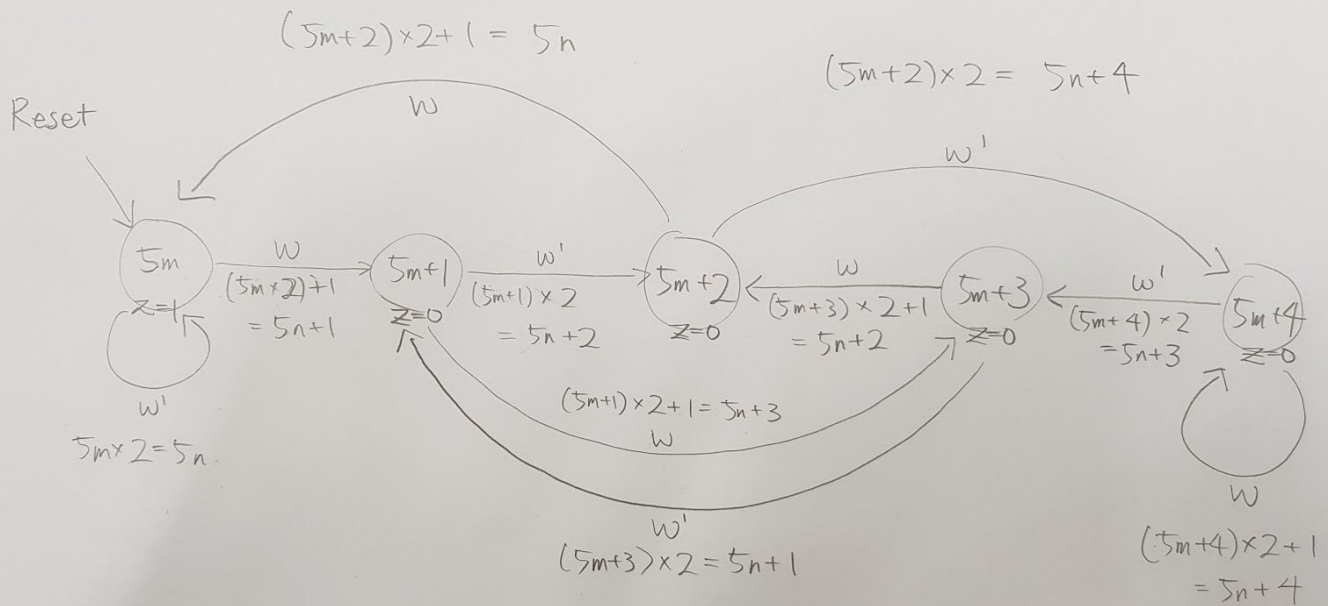


Step 1: state Diagram



Step 2. State Table

Present state	Next state		Output z
	$w=0$	$w=1$	
s_m	s_m	s_{m+1}	1
s_{m+1}	s_{m+2}	s_{m+3}	0
s_{m+2}	s_{m+4}	s_m	0
s_{m+3}	s_{m+1}	s_{m+2}	0
s_{m+4}	s_{m+3}	s_{m+4}	0

Step 3. State Assignment

Present state	Next state		Output z
	$w=0$ $Y_3 Y_2 Y_1$	$w=1$ $Y_3 Y_2 Y_1$	
s_m	000	001	1
s_{m+1}	001	010	0
s_{m+2}	010	100	0
s_{m+3}	011	001	0
s_{m+4}	100	011	0
	101	ddd	d
	110	ddd	d
	111	ddd	d