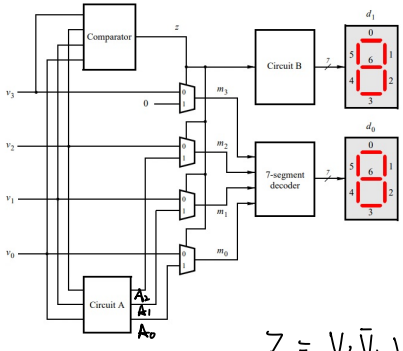
2)

Circuit A



	V_3	V_2	V_1	V_0
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

$$Z = V_3\bar{V}_2V_1\bar{V}_0 + V_3\bar{V}_2V_1V_0 + V_3V_2\bar{V}_1\bar{V}_0 + V_3V_2\bar{V}_1V_0 + V_3V_2\bar{V}_1V_0$$
$$+ V_3V_2V_1\bar{V}_0 + V_3V_2V_1V_0$$
$$= V_3\bar{V}_2V_1 + V_3V_2\bar{V}_1 + V_3V_2V_1$$
$$= V_3V_1 + V_3V_2 = V_3(V_1 + V_2)$$

	V_3	V_2	V_1	V_0	Z M_3	M_2	M_1	M_0
10	1	0	1	0	0	0	0	0
11	1	0	1	1	0	0	0	1
12	1	1	0	0	0	0	1	0
13	1	1	0	1	0	0	1	1
14	1	1	1	0	0	1	0	0
15	1	1	1	1	0	1	0	1

$$A_0 = M_0 = V_0$$
$$A_1 = M_1 = \bar{V}_1$$
$$A_2 = M_2 = V_2V_1\bar{V}_0 + V_2V_1V_0 = V_2 \cdot V_1$$