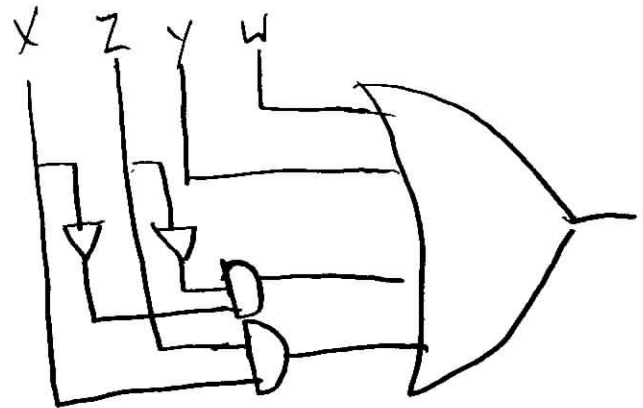| w	x	y	z	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	i	0
0	0	0	1	0	1	1	0	0	0	0
0	0	1	0	1	1	0	1	1	0	1
0	0	1	1	1	1	1	1	0	0	1
0	1	0	0	0	1	1	0	0	1	1
0	1	0	1	1	0	1	1	0	1	1
0	1	1	0	1	0	1	1	1	1	1
0	1	1	1	1	1	1	0	0	0	0
1	0	0	0	1	1	1	1	1	1	1
1	0	0	1	1	1	1	1	0	1	1
1	0	1	0	1	0	0	1	1	1	1
1	0	1	1	1	0	0	1	1	1	1
1	1	0	0	1	0	0	1	1	1	1
1	1	0	1	1	0	0	1	1	1	1
1	1	1	0	1	0	0	1	1	1	1
1	1	1	1	1	0	0	1	1	1	1

Roland Carter
CSC 376
Seven Segment Lab

a.)

WX \ YZ	00	01	11	10
00	1	0	1	1
01	0	1	1	1
11	1	1	1	1
10	1	1	1	1

$$a = y + w + \overline{x}\,\overline{z} + xz$$
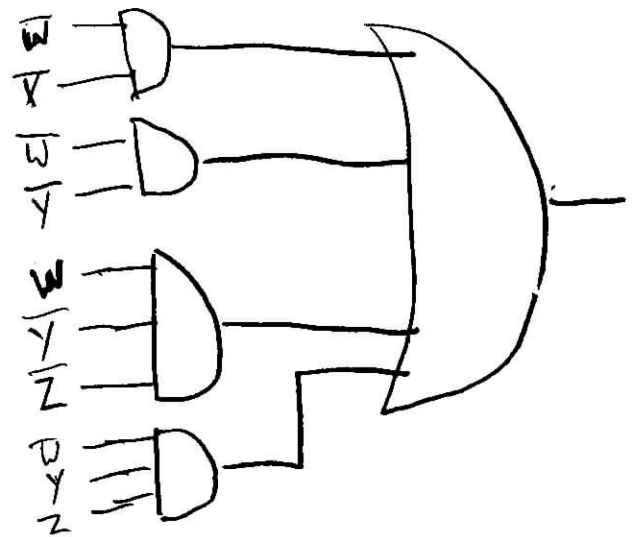
circuit

b.)

WX \ YZ	00	01	11	10
00	1	1	1	1
01	1	0	1	0
11	0	0	0	0
10	1	1	0	0

$$c = \overline{x}\,\overline{y} + \overline{w}z + \overline{w}x$$

c)

YZ \	00	01	11	10
00	1	1	1	0
01	1	1	1	1
11	0	0	0	0
10	1	1	0	0

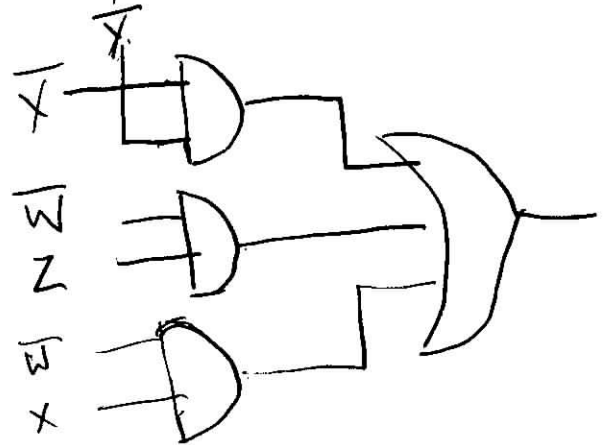$$C = \overline{X}\,\overline{Y} + \overline{W}Z + \overline{W}X$$

d)

WX \ YZ	00	01	11	10
00	1	0	1	1
01	0	1	0	1
11	1	1	1	1
10	1	1	1	1

$$d = X + W + \overline{X}\,\overline{Z} + y\overline{Z} + \overline{X}Y + Y +$$

$$X\hat{Y}Z$$

e)
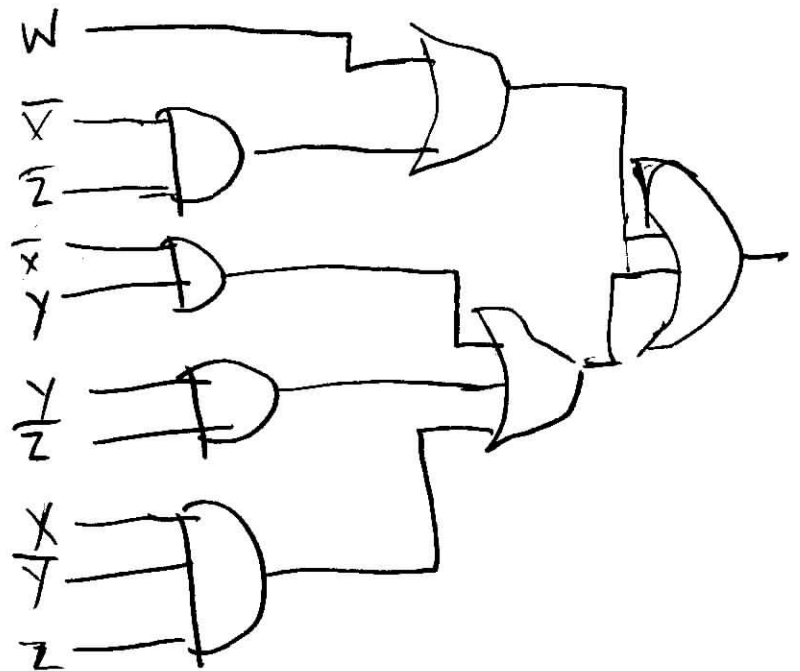
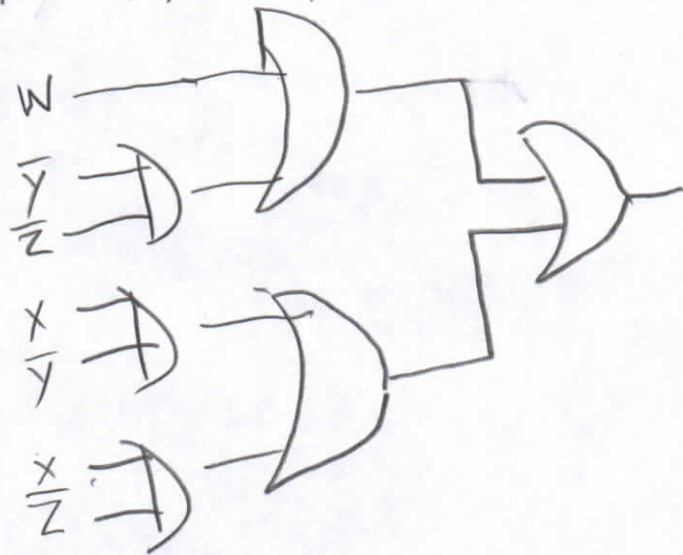| WX \ YZ	00	01	11	10
00	1	0	0	1
01	0	0	0	1
11	1	1	1	1
10	1	0	1	1

$$e = \overline{X}\,\overline{Z} + y\overline{Z} + Wy + WX$$

f.)
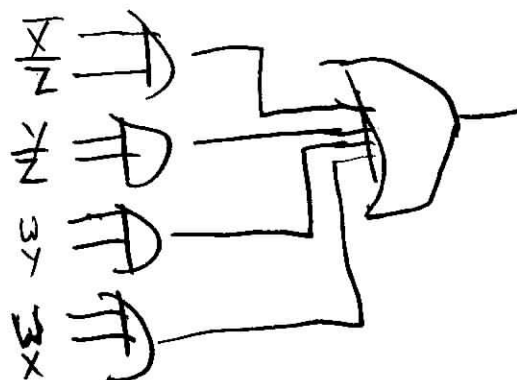
wx\yz	00	01	11	10
00	1	0	0	0
01	1	1	0	1
11	1	1	1	1
10	1	1	1	1

$f = W + \bar{y}\bar{z} + x\bar{y} + x\bar{z}$

W

$\bar{y}$
$\bar{z}$

x
$\bar{y}$

x
$\bar{z}$

9.)

wx\yz	00	01	11	10
00	0	0	1	1
01	1	1	1	0
11	1	0	1	1
10	1	1	1	1

$g = w + \bar{x}y + \bar{y}z + x\bar{y}$