

## EE 2310 Worksheet #2 – Boolean Algebra and Basic Digital Circuits

Draw the logic circuit for each of the following Boolean expressions:

$$f = (x \cdot y) + z$$

$$f = (\bar{x} \cdot y) + (x \cdot \bar{y})$$

$$f = (y + z) \cdot (x + w)$$

$$f = (x \cdot \bar{y}) + (y \cdot \bar{z}) + (\bar{x} \cdot z)$$

For the following truth tables, write the Boolean expression and draw the circuit.

x	y	z	f
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

x	y	z	f
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1