

## Homework Solutions - Section 10.2

1.

$$x'y'z' \vee x'y'z \vee xyz'$$

3.

x	y	z	xy	z'	xy $\vee$ z'	1
0	0	0	0	1	1	1
0	0	1	0	0	0	1
0	1	0	0	1	1	1
0	1	1	0	0	0	1
1	0	0	0	1	1	1
1	0	1	0	0	0	1
1	1	0	1	1	1	1
1	1	1	1	0	1	1

(a)  $xy = xyz' \vee xyz$

(b)  $z' = x'y'z' \vee x'yz' \vee xy'z' \vee xyz'$

(c)  $xy \vee z' = x'y'z' \vee x'yz' \vee xy'z' \vee xyz' \vee xyz$

(d)  $1 = \text{all eight minterms}$

7.

(a)  $xz \vee (y' \vee y'z) \vee xy'z' = xz \vee y' \vee xy'z' = xz \vee y'$

(b)  $((xy \vee xyz) \vee xz) \vee z = xy \vee xz \vee z = xy \vee z$