BECAUSE THIS IS A GRADED ASSIGNMENT, YOU MAY NEITHER GIVE NOR RECEIVE HELP.
Answer each question as indicated. **Think** first, then write. **Show all your work**, and remember to **check** your answers! Place your answers in the spaces provided at the right.

1. Use a table of values to determine whether or not the following are true statements.

a. $x(\bar{y} + z) = x\bar{y} + xz$

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

Statement 1a. is _____ .

b. $(x + \bar{y}) + z = (x + z) + (\bar{y} + z)$

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

Statement 1b. is _____ .

2. Find the sum-of-products expansion for $f(w, x, y, z) = wz + \overline{\overline{x}y}$.

w	x	y	z	
1	1	1	1	
1	1	1	0	
1	1	0	1	
1	1	0	0	
1	0	1	1	
1	0	1	0	
1	0	0	1	
1	0	0	0	
0	1	1	1	
0	1	1	0	
0	1	0	1	
0	1	0	0	
0	0	1	1	
0	0	1	0	
0	0	0	1	
0	0	0	0	

$f(w, x, y, z) =$