Name _____ Per ___

ICT K-Mapping
Homework #3

Simplify the following minterm expressions. Show all work.

1) $A\overline{B}\,\overline{C} + \overline{A}\,\overline{B}\,\overline{C} + \overline{A}\,\overline{B}\,\overline{C} + A\overline{B}C + AB\overline{C} + ABC + \overline{A}B\overline{C} = Y$

2) $\overline{A}BC + A\overline{B}\,\overline{C} + ABC + \overline{A}\,\overline{B}\,\overline{C} = Y$

3) $A\overline{B}\,\overline{C} + A\overline{B}C + ABC + AB\overline{C} + \overline{A}BC = Y$

4) $\overline{A}\,\overline{B}\,\overline{C} + \overline{A}B\overline{C} + ABC + A\overline{B}\,\overline{C} + AB\overline{C} + \overline{A}\,\overline{B}C = Y$

5) $\overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + \overline{A}BCD + A\overline{B}\,\overline{C}D + ABCD + \overline{A}\,\overline{B}C\overline{D} + \overline{A}B\overline{C}\,\overline{D} = Y$

6) $\overline{A}\,\overline{B}C\overline{D} + \overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + \overline{A}B\overline{C}\,\overline{D} + A\overline{B}\,\overline{C}\,\overline{D} + \overline{A}BC\overline{D} + \overline{A}B\overline{C}\,\overline{D} = Y$

7) $\overline{A}\,\overline{B}C\,\overline{D} + A\,\overline{B}\,\overline{C}\,\overline{D} + A\,\overline{B}C\,\overline{D} + AB\,\overline{C}\,\overline{D} + \overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + \overline{A}B\,\overline{C}\,\overline{D} = Y$

8) $A\overline{B}CD + AB\overline{C}\,\overline{D} + \overline{A}\,\overline{B}C\overline{D} + \overline{A}BCD + \overline{A}\,\overline{B}\,\overline{C}\,\overline{D} + \overline{A}\,\overline{B}CD +$
$A\overline{B}\,\overline{C}\,\overline{D} + \overline{A}B\overline{C}D + ABC\overline{D} + A\overline{B}\,\overline{C}D + \overline{A}\,\overline{B}\,\overline{C}D = Y$