3. POJEDNOSTAVLJENJE LOGIČKIH OPERACIJA
(SLOŽENIJI ZADACI)



a) $\overline{\bar{A}\cdot(A+B)} = \overline{\bar{A}\cdot A + \bar{A}\cdot B} = \overline{0+\bar{A}\cdot B} = \overline{\bar{A}\cdot B} = \bar{\bar{A}}+\bar{B}$

$= A+\bar{B}$ //

b) $\overline{\overline{A\cdot B}+A} = \overline{\overline{A}+\overline{B}}+\bar{A} = A\cdot B+\bar{A} = A\cdot B\cdot\bar{A} = A\cdot\bar{A}\cdot B = 0\cdot B = 0$ //

c) $\overline{\overline{A+B}\cdot A} = \overline{\overline{A}+\overline{B}}+\bar{A} = A+B+\bar{A} = A+\bar{A}+B = 1+B = 1$ //

d) $\overline{B\cdot(A+\bar{B})} = \overline{B\cdot A+B\cdot\bar{B}} = \overline{B\cdot A+0} = \overline{B\cdot A} = \bar{B}+\bar{A}$ //

e) $\overline{\bar{A}\cdot(A\cdot B)} = \overline{\bar{A}\cdot A\cdot B} = \overline{0\cdot B} = \bar{0} = 1$ //

f) $(\overline{\bar{A}+C})\cdot(\overline{B+\bar{C}}) = (\bar{\bar{A}}\cdot\bar{C})\cdot(\bar{B}\cdot\bar{\bar{C}}) = (A\cdot\bar{C})\cdot(\bar{B}\cdot C)$

$= A\cdot\bar{B}\cdot\bar{C}\cdot C = A\cdot\bar{B}\cdot 0 = 0$ //

g) $A\cdot(A\cdot\bar{B}+\bar{A}\cdot B+\bar{B}\cdot C) = A\cdot A\cdot\bar{B}+A\cdot\bar{A}\cdot B+A\cdot\bar{B}\cdot C =$

$= A\cdot\bar{B}+0\cdot B+A\cdot\bar{B}\cdot C = A\cdot\bar{B}+0+A\cdot\bar{B}\cdot C$

$= A\cdot\bar{B}+A\cdot\bar{B}\cdot C = A\cdot\bar{B}\cdot(1+C) = A\cdot\bar{B}\cdot 1 = A\cdot\bar{B}$ //