Задачи за упражнение:

Зад 1

$$f(A,B,C,D) = (\bar{B}+C+D).A.\bar{B}.C.D + (A+\bar{B}+C) + C+B+A =$$

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

$$= B.\bar{C}.\bar{D} + A.\bar{B}.C.D + \bar{A}.B.C + C.\bar{B}.\bar{A}$$

Зад 2

$$f(A,B,C,D) = \overline{\overline{A.B.C}.(A+\bar{C}+\bar{D}).(A+B+\bar{D})} =$$

$$= \overline{\overline{A.B.C}} + \overline{(A+\bar{C}+\bar{D})} + \overline{(A+B+\bar{D})} =$$

$$= A.B.C + \bar{A}.C.D + \bar{A}.\bar{B}.D$$

Зад 3

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

$$= \left(\overline{\overline{\overline{A} + B + D}}\right) \cdot \left(\overline{\overline{\overline{B}\,C\,\overline{D}} \cdot \overline{B\,\overline{C}\,D}}\right) =$$

$$= \left(\overline{A} + B + D\right) \cdot \left(\overline{\overline{\overline{B}\,C\,\overline{D}}} + \overline{\overline{B\,\overline{C}\,D}}\right) =$$

$$= \left(\overline{A} + B + D\right)\left(\overline{B}\,C\,\overline{D} + B\,\overline{C}\,D\right) =$$

$$= \overline{A}\,\overline{B}\,C\,\overline{D} + \overline{A}\,B\,\overline{C}\,D + B\,\overline{C}\,D +$$

~~$B\,\overline{C}\,D$~~