(6) Zauważmy, że funkcja opisana tabelką jest równa

DNF: $f(x,y,z) = xyz + x\bar{y}\bar{z} + \bar{x}y\bar{z} + \bar{x}\bar{y}z$

Zauważmy, że $(x \uparrow y \uparrow z) \uparrow (x \uparrow \bar{y} \uparrow \bar{z}) \uparrow (\bar{x} \uparrow y \uparrow \bar{z}) \uparrow (\bar{x} \uparrow \bar{y} \uparrow z) =$

$= \Big((xy + \bar{z}) \uparrow (x\bar{y} + z)\Big) \uparrow \Big((\bar{x}y + z) \uparrow (\bar{x}\bar{y} + \bar{z})\Big) =$

$= \overline{(xy + \bar{z})(x\bar{y} + z)} \uparrow \overline{(\bar{x}y + z)(\bar{x}\bar{y} + \bar{z})} =$

$= \Big((xy + \bar{z})(x\bar{y} + z)\Big) + \Big((\bar{x}y + z)(\bar{x}\bar{y} + \bar{z})\Big) =$

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

$= \Big((x + \underbrace{\bar{z}z}_{0})(y + \bar{z})(\bar{y} + z)\Big) + \Big((\bar{x} + \underbrace{z\bar{z}}_{0})(y + z)(\bar{y} + \bar{z})\Big)$

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

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

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