

$$(x \rightarrow y') \mid (z + (y' \vee (x'y)))$$

Вывести через $\{., \vee, '\}$:

$$\begin{aligned} (x \rightarrow y') \mid (z + (y' \vee (x'y))) &= (\bar{x} \vee \bar{y}) \mid (z + (\bar{y} \vee \bar{x}y)) = \\ &= (\bar{x} \vee \bar{y}) \mid (\bar{z}(\bar{y} \vee \bar{x}y) \vee z(\bar{y} \vee \bar{x}y)) = (\bar{x} \vee \bar{y}) \mid \\ &= (\bar{x} \vee \bar{y}) \mid (\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee z(\bar{y} \vee \bar{x}y)) = (\bar{x} \vee \bar{y}) \mid (\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee z(y(x \vee \bar{y}))) = \\ &= (\bar{x} \vee \bar{y}) \mid (\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee xyz) = (\bar{x} \vee \bar{y}) \cdot (\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee xyz) = \\ \textcircled{*} &= (\bar{x} \vee \bar{y}) \vee (\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee xyz) = xy \vee (y \vee z)(x \vee \bar{y} \vee z)(\bar{x} \vee \bar{y} \vee \bar{z}) = \\ &= xy \vee xy\bar{z} \vee \bar{x}yz \vee x\bar{y}z \vee \bar{x}\bar{y}z \vee \bar{y}z \vee \bar{x}z \vee \bar{y}z = \\ &= xy \vee \bar{x}z \vee \bar{y}z \vee \bar{x}\bar{y}z \vee \bar{x}yz \vee x\bar{y}z \vee xy\bar{z} = xy \vee \bar{x}z \vee \bar{y}z \end{aligned}$$

Вывести через $\{\rightarrow, '\}$

$$\begin{aligned} (x \rightarrow y') \mid (z + (y' \vee (x'y))) &= \textcircled{*} = (\bar{x} \vee \bar{y}) \vee (\bar{y}\bar{z} \vee \bar{x}y\bar{z} \vee xyz) = \\ &= \overline{(\bar{y} \vee z) \vee ((\bar{x}y\bar{z}) \vee (xyz))} \rightarrow (\bar{x} \rightarrow \bar{y}) = \\ &= ((\bar{y} \rightarrow z) \rightarrow y(\bar{x} \vee \bar{z} \vee xz)) \rightarrow (\bar{x} \rightarrow \bar{y}) = \\ &= ((\bar{y} \rightarrow z) \rightarrow y((\bar{x} \rightarrow z) \rightarrow (\bar{x} \rightarrow \bar{z}))) \rightarrow (\bar{x} \rightarrow \bar{y}) = \\ &= ((y' \rightarrow z) \rightarrow (y \rightarrow ((x' \rightarrow z) \rightarrow (x \rightarrow \bar{z}'))))' \rightarrow (x \rightarrow y')' \end{aligned}$$