MUAMMOLI MASALA VA TOPSHIRIQLAR:

1. Berilgan bul funksiyalarini a) x_1 o‘zgaruvchisi bo‘yicha yoyilmasini toping; b) x_1, x_2 o‘zgaruvchilari bo‘yicha yoyilmasini toping:

1) $f(\tilde{x}^2) = (x_2 \to x_1) \cdot (x_1 \downarrow x_2);$
2) $f(\tilde{x}^2) = (x_1 \leftrightarrow x_2) \vee (x_1 | x_2);$
3) $f(\tilde{x}^3) = ((x_1 \oplus x_2) \to x_3) \cdot \overline{(x_3 \to x_2)};$
4) $f(\tilde{x}^3) = ((x_1 \vee x_2 \cdot \overline{x_3}) \leftrightarrow (\overline{x_1} \to \overline{x_2} \cdot x_3))(x_2 \downarrow x_3)$
5) $f(\tilde{x}^3) = ((x_1 \vee x_2 \vee \overline{x_3}) \to (x_1 x_2 | x_3)) \oplus (x_2 \to x_1) \cdot x_3;$

2. Berilgan bul funksiyalarini MDNSh ga keltirib, ikki taraflama funksiyasini toping:

1) $f = (x \vee y \vee z) \cdot (y \oplus z) \vee x \cdot y \cdot z;$
2) $f = (x \vee (1 \to y)) \vee y \cdot \bar{z} \vee (\bar{x} | \overline{y \downarrow z});$
3) $f = (x \downarrow y) \oplus ((x | y) \downarrow (\bar{x} \leftrightarrow y \cdot z));$
4) $f = (\bar{x} \vee \bar{y} \vee (y \cdot \bar{z} \oplus 1)) \downarrow z;$
5) $f = (x \cdot (y \cdot z \vee 0) \leftrightarrow (z \cdot 1 \vee \bar{x} \cdot y)) \vee \bar{y} \cdot z;$

3. Berilgan bul funksiyalarini MKNSh ga keltirib, ikki taraflama funksiyasini toping:

1) $f(\tilde{x}^3) = x_1 \overline{x_2} \vee \overline{x_2} x_3 \vee (x_1 \to x_2 x_3);$
2) $f(\tilde{x}^3) = (x_1 \leftrightarrow \overline{x_2}) \vee (x_1 x_3 \oplus (x_2 \to x_3));$
3) $A = \overline{((x \leftrightarrow y) \to (x \to z))} \vee (x \oplus \bar{y} \cdot z);$
4) $A = x \to ((y \to z) \to y \cdot z);$
5) $f(\tilde{x}^3) = (\overline{x_1} \cdot x_2 \to x_3) \cdot ((x_1 \to x_3) \to x_2).$