

Diskret matematika fanidan savollar to'plami

1. A, B to'plamlari uchun tenglikni isbotlang

$$A \cup A \cap \overline{B} = A \cup B$$

2. Quyidagi funksiyalar uchun chinlik jadvalini tuzing

$$(x \& y) \vee z$$

3. MDNF va MKNF larni toping:

$$A \equiv (x \leftrightarrow y \rightarrow y \& z) \rightarrow ((x \rightarrow y) \rightarrow (z \rightarrow y)).$$

4. Jegalkin ko'phadini toping

$$xz \vee (x+z)y \vee x'z'$$

5. Quyidagi funktsiyalar sistemasini to'liqlikka tekshiring

$$\text{a) } xy \rightarrow (x \rightarrow z'); \text{ b) } (1+x)(y' + z)';$$

6. A, B to'plamlari uchun tenglikni isbotlang

$$A - B = A \otimes AB;$$

7. Quyidagi funksiyalar uchun chinlik jadvalini tuzing

$$x \& y \rightarrow (y \vee x \rightarrow z);$$

8. MDNF va MKNF larni toping:

$$A \equiv (x \rightarrow z) \rightarrow (y \leftrightarrow x);$$

9. Jegalkin ko'phadini toping

$$(x+1)(y+1)z' \vee yz$$

10. Quyidagi funktsiyalar sistemasini to'liqlikka tekshiring

$$\text{a) } xyz+1; \quad \text{b) } x't' \vee yz'$$

11. A, B to'plamlari uchun tenglikni isbotlang

$$A \otimes B = AB \cup (AB)$$

12. Quyidagi funksiyalar uchun chinlik jadvalini tuzing

$$(x \rightarrow y) \rightarrow (x \vee y \& z)$$

13. MDNF va MKNF larni toping:

$$A \equiv ((x \& y) \leftrightarrow x) \& ((x \& y) \rightarrow y);$$

14. Jegalkin ko'phadini toping

$$x' \vee y \vee z'$$

15. Quyidagi funktsiyalar sistemasini to'liqlikka tekshiring

$$\text{a) } xy \rightarrow z'; \quad \text{b) } (1+x)(y' + z)'$$

16. A, B to'plamlari uchun tenglikni isbotlang

$$A \cup B = (A \otimes B) \cup AB$$

17. Quyidagi funksiyalar uchun chinlik jadvalini tuzing

$$(x \& y) \rightarrow x;$$

18. MDNF va MKNF larni toping:

$$A \equiv ((x \& y) \rightarrow x) \leftrightarrow ((x \& y) \rightarrow y);$$

19. Jegalkin ko'phadini toping

$$(x \rightarrow (y \rightarrow z'))(yz' \rightarrow x);$$

20. Quyidagi funktsiyalar sistemasi to'liqlikka tekshiring

a) $x'y'z' \vee xy'z;$

b) $z \leftrightarrow (y + xz);$

21. A, B to'plamlari uchun tenglikni isbotlang

$$AB \cup AB = A$$

22. Quyidagi funktsiyalar uchun chinlik jadvalini tuzing

$$x \rightarrow (x \vee y);$$

23. MDNF va MKNF larni toping:

$$A \equiv ((x \leftrightarrow y) \rightarrow x) \downarrow (x \rightarrow (y \& x));$$

24. Jegalkin ko'phadini toping

$$x(y \rightarrow z) \vee (x'y \vee xy')(z+1);$$

25. Quyidagi funktsiyalar sistemasini to'liqlikka tekshiring

a) $(x+y+1)(z+1);$ b) $x'(y \rightarrow z');$

26. A, B to'plamlari uchun tenglikni isbotlang

$$A \cup (B - A) = A \cup B$$

27. Quyidagi funktsiyalar uchun chinlik jadvalini tuzing

$$(x \rightarrow y) \rightarrow (y \rightarrow x);$$

28. MDNF va MKNF larni toping:

$$A \equiv (x \rightarrow y) \rightarrow ((y \leftrightarrow z) \rightarrow (x \& z))$$

29. Jegalkin ko'phadini toping

$$x'(yz' \vee y'z);$$

30. Quyidagi funktsiyalar sistemasi to'liqlikka tekshiring

a) $x'y'z';$ b) $(x+1)(y+1)(z+1);$