

O'quvchi 01 (7-A)

Variant: 1D747005 • Matematika • 7-A

1. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsha, $\frac{AB}{C}$ ning qiyamatini toping.

- A) 2 B) $\sqrt[6]{2}$ C) $\sqrt[3]{2}$ D) $\sqrt{2}$

2. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $\sqrt[3]{2}$ B) 1,5 C) 0,25 $\sqrt[3]{65}$ D) 1

3. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,6)}{3+6\sqrt{0,22)}}} - \sqrt{\frac{13+6\sqrt{4,6)}{3-6\sqrt{0,22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$
B) $2\sqrt{7}$
C) $2(2\sqrt{3}-\sqrt{7})$
D) $2\sqrt{14}$

4. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsha, x ni toping.

- A) cheksiz ko'p B) 1 C) 3 D) 27

5. bu yerda $[a] = asoniningbutunqismi$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124 B) -50 C) -62 D) -105

6. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4 B) 3 C) 2 D) 1

7. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) $\sqrt{30}$ B) 11 C) 1 D) 0

8. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsha, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt[3]{2}$
B) $\sqrt[6]{2}$
C) 2 O'quvchilarim mazza qilsin: 2-Variant
D) $\sqrt{2}$

9. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 1 C) 0 D) 1

10. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $\frac{1}{4-2\sqrt{2}}$ C) $-4-2\sqrt{2}$ D) $4-2\sqrt{2}$

11. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}-\frac{1}{n+1}$
B) $1+\frac{1}{n}-\frac{1}{n+1}$
C) $1+\frac{1}{n}+\frac{1}{n+1}$
D) $1-\frac{1}{n}+\frac{1}{n+1}$

12. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 33 B) 11 C) 22 D) 44

13. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) 2 B) $\frac{\sqrt{2}}{2}$ C) $\frac{\sqrt{6}}{3}$ D) $\sqrt{2}$

14. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $-2\sqrt{3}$ B) $2\sqrt{3}$ C) -2 D) 2

15. Agar $a=39-\sqrt{432}$ bo'lsha, $\sqrt{a}+\sqrt{3}$ ifodaning qiyamatini toping.

- A) $6+\sqrt{3}$ B) 6 C) 3 D) $6\sqrt{3}$

16. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsha, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $4\sqrt{5}$ B) $6\sqrt{2}$ C) $-6\sqrt{2}$ D) $-4\sqrt{5}$

17. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $-4-2\sqrt{2}$

18. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsha, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $-4\sqrt{5}$ B) $-6\sqrt{2}$ C) $4\sqrt{5}$ D) $6\sqrt{2}$

19. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
B) $\sqrt{2}+\sqrt{3}$
C) $\sqrt{2}+1$
D) $\sqrt{2}+\sqrt{10}$

20. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5 B) 2 C) 3 D) 7

21. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsha, x va y ning o'rta arifmetigini toping.

- A) 5 B) 8 C) 3 D) 4

22. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5 B) 7 C) 3 D) 2

23. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) -1 C) 3 D) 0

24. $a = \pi - e$, bo'lsha ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)} + a^2(a+1)+1 - \sqrt{a^2(a^2+a-1)} - a^2(a+1)+1$$

- A) $2-2a^2$ B) 2 C) $2a^2$ D) $\sqrt{a^4+1} - \sqrt{a^4-1}$

25. Hisoblang: $\frac{3}{2\sqrt{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16}+1$
B) $(\sqrt[3]{4}+1)^2$
C) $\sqrt[3]{4}$
D) $-(\sqrt[3]{4}+1)^2$

26. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1 B) $\sqrt[3]{2}$ C) 1,5 D) $0,25\sqrt[3]{65}$

27. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,6)}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) $2\sqrt{2}$ C) $\sqrt{6}$ D) 2

28. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}-\frac{1}{n+1}$
B) $1+\frac{1}{n}-\frac{1}{n+1}$
C) $1-\frac{1}{n}+\frac{1}{n+1}$
D) $1+\frac{1}{n}+\frac{1}{n+1}$

29. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -480 B) -120 C) -240 D) -60

30. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 2 B) $\sqrt{2}+1$ C) 1 D) $\sqrt{2}-1$

31. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 1 C) 4 D) 2

32. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,6)}{3+6\sqrt{0,22)}}} - \sqrt{\frac{13+6\sqrt{4,6)}{3-6\sqrt{0,22)}}}$

- A) $2\sqrt{14}$
B) $2\sqrt{7}$
C) $2(2\sqrt{3}-\sqrt{7})$
D) $-2(\sqrt{7}+2\sqrt{3})$

33. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 10 B) 12 C) $6\sqrt{3}$ D) $5-3\sqrt{3}$

34. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
A) $\sqrt{2}$ B) $\frac{\sqrt{6}}{3}$ C) 2 D) $\frac{\sqrt{2}}{2}$

35. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 10 B) 18 C) 20 D) 16

36. Hisoblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$
A) 22 B) 44 C) 11 D) 33

37. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$
B) $\sqrt[3]{4}$
C) $-(\sqrt[3]{4} + 1)^2$
D) $(\sqrt[3]{4} + 1)^2$

38. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2} + 1$ B) 2 C) 1 D) $\sqrt{2} - 1$

39. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
A) 1 B) $\sqrt{24}$ C) 2 D) 5

40. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2} - \sqrt[3]{xy} + \sqrt[3]{y^2}}$ $\bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2} + \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 5 B) 6 C) 4 D) 8

41. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$
A) 6 B) 7 C) 8 D) 9

42. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) $\sqrt{4}$ B) 1 C) 5 D) 25

43. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{10}$
B) $\sqrt{2} + \sqrt{3}$
C) $\sqrt{2} + \sqrt{5}$
D) $\sqrt{2} + 1$

44. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

45. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 2 B) 1 C) $\sqrt{24}$ D) 5

46. Agar a=39 $-\sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodanig qiyamatini toping.

- A) 6 B) $6\sqrt{3}$ C) 3 D) $6+\sqrt{3}$

47. $\sqrt{\sqrt{241 + 44\sqrt{30}}} - (\sqrt{6} - \sqrt{5})^{-1}$
A) $\sqrt{30}$ B) 1 C) 11 D) 0

48. bu yerda [a] – asonining butunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124 B) -62 C) -105 D) -50

49. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$
A) 8 B) 6 C) 9 D) 7

50. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) $5-3\sqrt{3}$ C) 12 D) 10

51. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
A) -480 B) -120 C) -240 D) -60

52. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
A) -2 B) $-2\sqrt{3}$ C) 2 D) $2\sqrt{3}$

53. Soddalashtiring: $\frac{\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}}{\frac{\sqrt{y}+3\sqrt{x}}{\sqrt{y}-\sqrt{x}}}$
A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

54. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
A) $2\sqrt{3}$ B) $2\sqrt{2}$ C) $\sqrt{6}$ D) 2

55. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) cheksiz ko'p C) 1 D) 3

56. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$$

A) $2 - 2a^2$ B) $2a^2$ C) 2 D) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$

57. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 5 C) 8 D) 3

58. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 18 B) 10 C) 20 D) 16

59. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$
A) 5 B) $\sqrt{4}$ C) 1 D) 25

60. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2} - \sqrt[3]{xy} + \sqrt[3]{y^2}}$ $\bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2} + \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$
A) 6 B) 8 C) 4 D) 5

O'quvchi 02 (7-A)

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1. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) -2 B) 2 C) $2\sqrt{3}$ D) $-2\sqrt{3}$

2. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 5 B) 4 C) 3 D) 8

3. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $\frac{1}{4-2\sqrt{2}}$ B) $4-2\sqrt{2}$ C) $0,5-0,25\sqrt{2}$ D) $-4-2\sqrt{2}$

4. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $4\sqrt{5}$ B) $-4\sqrt{5}$ C) $6\sqrt{2}$ D) $-6\sqrt{2}$

5. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) 2 B) $\sqrt{a^4+1} - \sqrt{a^4-1}$ C) $2a^2$ D) $2-2a^2$

6. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60 B) -480 C) -120 D) -240

7. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 1 B) 3 C) 4 D) 2

8. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

9. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\cdots}}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 6 B) 8 C) 9 D) 7

10. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -480 B) -60 C) -120 D) -240

11. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}-1$ B) $\sqrt{2}+1$ C) 2 D) 1

12. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B) $\sqrt{24}$ C) 2 D) 1

13. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
 B) $\sqrt{2}+\sqrt{10}$
 C) $\sqrt{2}+1$
 D) $\sqrt{2}+\sqrt{3}$

14. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
 B) $(\sqrt[3]{4}+1)^2$
 C) $-(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{16}+1$

15. Hisoblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 44 B) 11 C) 22 D) 33

16. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B) $\sqrt{24}$ C) 1 D) 2

17. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) $6+\sqrt{3}$ B) 3 C) 6 D) $6\sqrt{3}$

18. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $2\sqrt{14}$
 D) $2\sqrt{7}$

19. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 6 B) 8 C) 4 D) 5

20. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\sqrt{2}$ B) 2 C) $\frac{\sqrt{6}}{3}$ D) $\frac{\sqrt{2}}{2}$

21. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}+1$ B) $\sqrt{2}-1$ C) 1 D) 2

22. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1+\frac{1}{n}+\frac{1}{n+1}$
 B) $1-\frac{1}{n}-\frac{1}{n+1}$
 C) $1+\frac{1}{n}-\frac{1}{n+1}$
 D) $1-\frac{1}{n}+\frac{1}{n+1}$

23. bu yerda $[a] = \text{asoniningbutungqismi}$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -105 B) -50 C) -124 D) -62

24. A= $\sqrt{2} - \sqrt[3]{2}$, B = $\sqrt[3]{2} + \sqrt[3]{2} + 1$ va C = $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$
 B) $\sqrt{2}$
 C) 2 O'quvchilarim mazza qilsin: 2-Variant
 D) $\sqrt[3]{2}$

25. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 5 B) 25 C) $\sqrt{4}$ D) 1

26. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 0 B) 3 C) 1 D) -1

27. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 0,25 $\sqrt[3]{65}$ B) 1 C) 1,5 D) $\sqrt[3]{2}$

28. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{7}$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $2\sqrt{14}$
 D) $-2(\sqrt{7}+2\sqrt{3})$

29. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 10 B) $5-3\sqrt{3}$ C) $6\sqrt{3}$ D) 12

30. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning yaysi biriga teng.

- A) 2 B) 3 C) 7 D) 5

31. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) 2 B) $\frac{\sqrt{2}}{2}$ C) $\sqrt{2}$ D) $\frac{\sqrt{6}}{3}$

32. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 20 B) 18 C) 16 D) 10

33. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) 2 C) $2\sqrt{2}$ D) $2\sqrt{3}$

34. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) 3 C) cheksiz ko'p D) 1

35. Hisoblang: $\frac{\sqrt{5-3\sqrt{2},(6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2},(6)}}{\sqrt{2}}$

- A) $2\sqrt{2}$ B) 2 C) $2\sqrt{3}$ D) $\sqrt{6}$

36. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 0 C) 1 D) 1

37. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{10}$
B) $\sqrt{2} + \sqrt{5}$
C) $\sqrt{2} + 1$
D) $\sqrt{2} + \sqrt{3}$

38. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 4 C) 1 D) 2

39. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) $6\sqrt{3}$ B) $6 + \sqrt{3}$ C) 3 D) 6

40. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}})}$ =?

- A) 5 B) 6 C) 8 D) 4

41. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 10 B) 20 C) 18 D) 16

42. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) cheksiz ko'p C) 1 D) 3

43. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

44. A = $\sqrt{2} - \sqrt[3]{2}$, B = $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C = $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[3]{2}$ B) 2 C) $\sqrt{2}$ D) $\sqrt[6]{2}$

45. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$

- A) 1 B) $\sqrt{30}$ C) 11 D) 0

46. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$ B) $-2\sqrt{3}$ C) 2 D) -2

47. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 44 B) 22 C) 11 D) 33

48. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
B) $(\sqrt[3]{4}+1)^2$
C) $-(\sqrt[3]{4}+1)^2$
D) $\sqrt[3]{16}+1$

49. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 8 D) 4

50. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}-\frac{1}{n+1}$
B) $1+\frac{1}{n}-\frac{1}{n+1}$
C) $1-\frac{1}{n}+\frac{1}{n+1}$
D) $1+\frac{1}{n}+\frac{1}{n+1}$

51. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 6 B) 7 C) 8 D) 9

52. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $4\sqrt{5}$ B) $-6\sqrt{2}$ C) $-4\sqrt{5}$ D) $6\sqrt{2}$

53. bu yerda $[a] = a$ sonining butungismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -105 C) -62 D) -124

54. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1 B) $0,25\sqrt[3]{65}$ C) 1,5 D) $\sqrt[3]{2}$

55. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) $\sqrt{4}$ B) 5 C) 25 D) 1

56. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3 B) 7 C) 5 D) 2

57. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$

- A) 1 B) $\sqrt{30}$ C) 11 D) 0

58. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $0,5-0,25\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

59. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$

- A) 2 B) $2a^2$ C) $\sqrt{a^4+1}-\sqrt{a^4-1}$ D) $2-2a^2$

60. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) 12 C) $5-3\sqrt{3}$ D) 10

O'quvchi 03 (7-A)

Variant: 87FC45D0 • Matematika • 7-A

1. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
 A) 2 B) $\sqrt{6}$ C) $2\sqrt{3}$ D) $2\sqrt{2}$

2. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.
 A) 3 B) $6\sqrt{3}$ C) $6+\sqrt{3}$ D) 6

3. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
 A) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 D) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

4. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

A) 2 B) 4 C) 1 D) 3

5. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) $\frac{\sqrt{2}}{2}$ B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) 2

6. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}}$ • $(x^{\frac{1}{3}}-y^{\frac{1}{3}})$ • $\frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}$ • $(x^{\frac{1}{3}}+y^{\frac{1}{3}})$ =?

A) 6 B) 8 C) 5 D) 4

7. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
 A) $1+\frac{1}{n}-\frac{1}{n+1}$
 B) $1-\frac{1}{n}-\frac{1}{n+1}$
 C) $1+\frac{1}{n}+\frac{1}{n+1}$
 D) $1-\frac{1}{n}+\frac{1}{n+1}$

8. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $-2(\sqrt{7}+2\sqrt{3})$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $2\sqrt{14}$
 D) $2\sqrt{7}$

9. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.
 A) $6\sqrt{3}$ B) 6 C) $6+\sqrt{3}$ D) 3

10. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
 A) -60 B) -480 C) -240 D) -120

11. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $2\sqrt{7}$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $-2(\sqrt{7}+2\sqrt{3})$
 D) $2\sqrt{14}$

12. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2}$ =?

A) $6\sqrt{2}$ B) $-6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

13. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
 A) 1,5 B) 1 C) $\sqrt[3]{2}$ D) $0,25\sqrt[3]{65}$

14. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) $\sqrt{2}-1$ B) $\sqrt{2}+1$ C) 2 D) 1

15. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}}$ • $(x^{\frac{1}{3}}-y^{\frac{1}{3}})$ • $\frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}$ • $(x^{\frac{1}{3}}+y^{\frac{1}{3}})$ =?

A) 5 B) 6 C) 4 D) 8

16. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

A) $\sqrt{a^4+1} - \sqrt{a^4-1}$ B) $2a^2$ C) $2-2a^2$ D) 2

17. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$
 A) 0 B) 1 C) $\sqrt{30}$ D) 11

18. $\frac{\sqrt{1+\sqrt{2}}+\sqrt{3}+\dots+\sqrt{10}}{\sqrt{5}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

A) 3 B) 5 C) 7 D) 2

19. $x^2+y^2+z^2=6x+8y+10z-50$ bo'lsa, x ni toping.

A) cheksiz ko'p B) 1 C) 27 D) 3

20. bu yerda $[a] = a$ sonining butunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

A) -124 B) -62 C) -105 D) -50

21. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

A) $\sqrt{2}+\sqrt{5}$
 B) $\sqrt{2}+\sqrt{10}$
 C) $\sqrt{2}+1$
 D) $\sqrt{2}+\sqrt{3}$

22. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

A) 1 B) $\sqrt[3]{2}$ C) 1,5 D) $0,25\sqrt[3]{65}$

23. $\sqrt[3]{4}\sqrt{2}\sqrt[3]{4\sqrt{2}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

A) 7 B) 9 C) 8 D) 6

24. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

A) $\frac{\sqrt{2}}{2}$ B) 2 C) $\sqrt{2}$ D) $\frac{\sqrt{6}}{3}$

25. $\frac{\sqrt{0,5}}{\sqrt[4]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt[4]{0,9+1,5}} = ?$

A) 2 B) $\sqrt{24}$ C) 5 D) 1

26. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

A) $\sqrt[3]{16}+1$
 B) $-(\sqrt[3]{4}+1)^2$
 C) $\sqrt[3]{4}$
 D) $(\sqrt[3]{4}+1)^2$

27. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

A) 3 B) 4 C) 8 D) 5

28. Soddalashtiring: $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$

A) 0 B) 1 C) 1 D) 3

29. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

A) 44 B) 11 C) 22 D) 33

30. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

A) $-(\sqrt[3]{4}+1)^2$
 B) $\sqrt[3]{16}+1$
 C) $\sqrt[3]{4}$
 D) $(\sqrt[3]{4}+1)^2$

31. $A=\sqrt{2}-\sqrt[3]{2}$, $B=\sqrt[3]{2}+\sqrt[6]{2}+1$ va $C=\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

A) $\sqrt[3]{2}$
 B) 2 O'quvchilarim mazza qilsin: 2-Variant
 C) $\sqrt[6]{2}$
 D) $\sqrt{2}$

32. Hisoblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 11 B) 33 C) 22 D) 44

33. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $5-3\sqrt{3}$ B) 12 C) 10 D) $6\sqrt{3}$

34. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 8 B) 4 C) 5 D) 3

35. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 1 B) 3 C) 2 D) 4

36. $\frac{\sqrt{1} \bullet \sqrt{2} \bullet \sqrt{3} \bullet \dots \bullet \sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysisi biriga teng.

- A) 5 B) 7 C) 2 D) 3

37. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $\frac{1}{4-2\sqrt{2}}$ C) $4-2\sqrt{2}$ D) $-4-2\sqrt{2}$

38. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 1 B) 5 C) 25 D) $\sqrt{4}$

39. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 5 B) 1 C) $\sqrt{4}$ D) 25

40. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $4\sqrt{5}$ B) $-6\sqrt{2}$ C) $6\sqrt{2}$ D) $-4\sqrt{5}$

41. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

42. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $\frac{1}{4-2\sqrt{2}}$ C) $0,5-0,25\sqrt{2}$ D) $4-2\sqrt{2}$

43. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt[6]{2}$ B) 2 C) $\sqrt{2}$ D) $\sqrt[3]{2}$

44. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) $\sqrt{2}-1$ C) 2 D) $\sqrt{2}+1$

45. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 16 B) 20 C) 18 D) 10

46. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) 2 C) $\sqrt{6}$ D) $2\sqrt{2}$

47. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) 2 B) $2\sqrt{3}$ C) $-2\sqrt{3}$ D) -2

48. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 8 B) 7 C) 9 D) 6

49. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -480 B) -120 C) -240 D) -60

50. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{5}$
B) $\sqrt{2} + 1$
C) $\sqrt{2} + \sqrt{10}$
D) $\sqrt{2} + \sqrt{3}$

51. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) -1 C) 1 D) 0

52. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 20 B) 18 C) 10 D) 16

53. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 - \frac{1}{n} + \frac{1}{n+1}$
B) $1 - \frac{1}{n} - \frac{1}{n+1}$
C) $1 + \frac{1}{n} + \frac{1}{n+1}$
D) $1 + \frac{1}{n} - \frac{1}{n+1}$

54. bu yerda $[a] = a$ sonining butung'ismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -105 B) -62 C) -50 D) -124

55. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)} + a^2(a+1) + 1 - \sqrt{a^2(a^2+a-1)} - a^2(a+1) + 1$

- A) 2 B) $\sqrt{a^4+1} - \sqrt{a^4-1}$ C) $2 - 2a^2$ D) $2a^2$

56. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) 10 C) 12 D) $5-3\sqrt{3}$

57. $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$

- A) 11 B) 0 C) 1 D) $\sqrt{30}$

58. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 1 B) 3 C) cheksiz ko'p D) 27

59. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B) 2 C) $\sqrt{24}$ D) 1

60. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) -2 B) 2 C) $2\sqrt{3}$ D) $-2\sqrt{3}$

O'quvchi 04 (7-A)

Variant: 54B20E7B • Matematika • 7-A

1. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

A) $\sqrt{2} + \sqrt{5}$
 B) $\sqrt{2} + \sqrt{3}$
 C) $\sqrt{2} + 1$
 D) $\sqrt{2} + \sqrt{10}$

2. bu yerda $[a] - asoniningbutunqismi$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

A) -62 B) -124 C) -105 D) -50

3. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

A) $-2\sqrt{3}$ B) -2 C) 2 D) $2\sqrt{3}$

4. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

A) $\sqrt{24}$ B) 1 C) 5 D) 2

5. $a = \pi - e$, bo'lsha ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

A) $2-2a^2$ B) $2a^2$ C) 2 D) $\sqrt{a^4+1} - \sqrt{a^4-1}$

6. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

A) 1 B) 2 C) $\sqrt{2}-1$ D) $\sqrt{2}+1$

7. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsha, $\frac{AB}{C}$ ning qiyamatini toping.

A) $\sqrt[6]{2}$ B) 2 C) $\sqrt[3]{2}$ D) $\sqrt{2}$

8. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsha, x ni toping.

A) 27 B) 1 C) cheksiz ko'p D) 3

9. Agar $a=39 - \sqrt{432}$ bo'lsha, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

A) $6 + \sqrt{3}$ B) 3 C) 6 D) $6\sqrt{3}$

10. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

A) $-2\sqrt{3}$ B) -2 C) 2 D) $2\sqrt{3}$

11. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

A) $1 - \frac{1}{n} + \frac{1}{n+1}$
 B) $1 + \frac{1}{n} - \frac{1}{n+1}$
 C) $1 - \frac{1}{n} - \frac{1}{n+1}$
 D) $1 + \frac{1}{n} + \frac{1}{n+1}$

12. bu yerda $[a] - asoniningbutunqismi$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

A) -62 B) -105 C) -124 D) -50

13. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{3(\sqrt{y}+\sqrt{x})}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

14. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

A) 1 B) $\sqrt[3]{2}$ C) $0,25\sqrt[3]{65}$ D) 1,5

15. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

A) $\sqrt{4}$ B) 1 C) 25 D) 5

16. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

A) 33 B) 11 C) 22 D) 44

17. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

A) 1 B) 2 C) 4 D) 3

18. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[a]{a} + \sqrt[b]{b}$ bo'lsha, a+b ni toping.

A) 18 B) 16 C) 10 D) 20

19. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

A) 11 B) 1 C) 0 D) $\sqrt{30}$

20. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

A) $\sqrt{2} + \sqrt{3}$
 B) $\sqrt{2} + \sqrt{10}$
 C) $\sqrt{2} + 1$
 D) $\sqrt{2} + \sqrt{5}$

21. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

A) $\sqrt[3]{4}$
 B) $-(\sqrt[3]{4}+1)^2$
 C) $(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{16}+1$

22. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

A) -240 B) -60 C) -120 D) -480

23. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsha, x va y ning o'rta arifmetigini toping.

A) 3 B) 5 C) 4 D) 8

24. $a = \pi - e$, bo'lsha ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

A) $\sqrt{a^4+1} - \sqrt{a^4-1}$ B) $2-2a^2$ C) $2a^2$ D) 2

25. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

A) 5 B) 4 C) 8 D) 6

26. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

A) 11 B) 33 C) 22 D) 44

27. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

A) 5 B) 25 C) 1 D) $\sqrt{4}$

28. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

A) 6 B) 8 C) 9 D) 7

29. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

A) -1 B) 1 C) 0 D) 3

30. $4+2\sqrt{2}$ somiga teskari sonni toping.

A) $0,5-0,25\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $4-2\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

31. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

A) 3 B) 5 C) 7 D) 2

32. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

A) $1 + \frac{1}{n} - \frac{1}{n+1}$
 B) $1 + \frac{1}{n} + \frac{1}{n+1}$
 C) $1 - \frac{1}{n} + \frac{1}{n+1}$
 D) $1 - \frac{1}{n} - \frac{1}{n+1}$

33. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsha, x ni toping.

A) 1 B) cheksiz ko'p C) 3 D) 27

34. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

A) $\sqrt{6}$ B) $2\sqrt{3}$ C) $2\sqrt{2}$ D) 2

35. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$
 A) $\sqrt{30}$ B) 11 C) 0 D) 1

36. $4+2\sqrt{2}$ soniga teskari sonni toping.
 A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

37. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2}\dots}}}+\sqrt{30+\sqrt{30+\sqrt{30+\dots}}}=?$
 A) 7 B) 8 C) 9 D) 6

38. Hisoblang: $\sqrt[3]{5+2\sqrt{13}}+\sqrt[3]{5-2\sqrt{13}}$
 A) $\sqrt[3]{2}$ B) 1 C) 1,5 D) $0,25\sqrt[3]{65}$

39. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}}-\frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}}+\sqrt[3]{4}$
 A) $(\sqrt[3]{4}+1)^2$
 B) $\sqrt[3]{16}+1$
 C) $-(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{4}$

40. Hisoblang: $(\frac{10}{\sqrt{6+1}}+\frac{2}{\sqrt{6-2}}-\frac{6}{3-\sqrt{6}})\bullet(\sqrt{96}+\sqrt{(\frac{1}{24})^{-2}})$
 A) -480 B) -120 C) -60 D) -240

41. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
 A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

42. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}ga$ teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 4 C) 2 D) 1

43. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 8 D) 4

44. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) $6+\sqrt{3}$ B) 3 C) $6\sqrt{3}$ D) 6

45. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}}+\frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
 A) $2\sqrt{2}$ B) 2 C) $2\sqrt{3}$ D) $\sqrt{6}$

46. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}}\bullet(x^{\frac{1}{3}}-y^{\frac{1}{3}})\bullet\frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}\bullet(x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$

- A) 6 B) 8 C) 4 D) 5

47. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 3 C) 5 D) 7

48. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}}+\frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}}=$
 A) 2 B) $\frac{\sqrt{6}}{3}$ C) $\sqrt{2}$ D) $\frac{\sqrt{2}}{2}$

49. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2}-\sqrt{9x^2-12xy+4y^2}=?$
 A) $6\sqrt{2}$ B) $-4\sqrt{5}$ C) $4\sqrt{5}$ D) $-6\sqrt{2}$

50. $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$
 A) $5-3\sqrt{3}$ B) 10 C) 12 D) $6\sqrt{3}$

51. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}}=\sqrt[a]{a}+\sqrt[b]{b}$ bo'lsa, a+b ni toping.
 A) 18 B) 10 C) 16 D) 20

52. $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$
 A) $5-3\sqrt{3}$ B) $6\sqrt{3}$ C) 12 D) 10

53. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}}+\frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}}=$
 A) $\frac{\sqrt{2}}{2}$ B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) 2

54. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}}-\sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $2(2\sqrt{3}-\sqrt{7})$
 B) $2\sqrt{14}$
 C) $-2(\sqrt{7}+2\sqrt{3})$
 D) $2\sqrt{7}$

55. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt{2}$
 B) 2 O'quvchilarim mazza qilsin: 2-Variant
 C) $\sqrt[6]{2}$
 D) $\sqrt[3]{2}$

56. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2}+2$
 A) 1 B) 0 C) 3 D) 1

57. $\frac{\sqrt{0,5}}{\sqrt{2,4}}\bullet\left(\sqrt{\frac{1,2-0,7}{1,2+0,7}}+\sqrt{\frac{2,4+1,4}{2,4-1,4}}\right)\cdot\frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}}=?$
 A) 5 B) $\sqrt{24}$ C) 2 D) 1

58. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}}-\sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $-2(\sqrt{7}+2\sqrt{3})$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $2\sqrt{7}$
 D) $2\sqrt{14}$

59. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) $\sqrt{2}-1$ B) 1 C) 2 D) $\sqrt{2}+1$

60. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2}-\sqrt{9x^2-12xy+4y^2}=?$
 A) $-6\sqrt{2}$ B) $-4\sqrt{5}$ C) $6\sqrt{2}$ D) $4\sqrt{5}$

O'quvchi 05 (7-A)

Variant: A076C8E4 • Matematika • 7-A

1. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
 A) $1 + \frac{1}{n} + \frac{1}{n+1}$
 B) $1 - \frac{1}{n} - \frac{1}{n+1}$
 C) $1 - \frac{1}{n} + \frac{1}{n+1}$
 D) $1 + \frac{1}{n} - \frac{1}{n+1}$

2. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$
 A) 12 B) 10 C) $5 - 3\sqrt{3}$ D) $6\sqrt{3}$

3. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$$

A) 2 B) $2a^2$ C) $2 - 2a^2$ D) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$

4. bu yerda $[a] = a \sin \pi n + b \cos \pi n$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

A) -62 B) -50 C) -124 D) -105

5. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

A) 27 B) cheksiz ko'p C) 3 D) 1

6. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

7. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

A) 2 O'quvchilarim mazza qilsin: 2-Variant
 B) $\sqrt[6]{2}$
 C) $\sqrt{2}$
 D) $\sqrt[3]{2}$

8. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$
 A) 5 B) 25 C) 1 D) $\sqrt{4}$

9. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) $\frac{\sqrt{6}}{3}$ B) $\sqrt{2}$ C) 2 D) $\frac{\sqrt{2}}{2}$

10. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) $\frac{\sqrt{6}}{3}$ B) $\frac{\sqrt{2}}{2}$ C) $\sqrt{2}$ D) 2

11. Hisoblang: $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0.(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0.(22)}}}$
 A) $2\sqrt{7}$
 B) $2\sqrt{14}$
 C) $2(2\sqrt{3} - \sqrt{7})$
 D) $-2(\sqrt{7} + 2\sqrt{3})$

12. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

A) $6\sqrt{3}$ B) $6 + \sqrt{3}$ C) 3 D) 6

13. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
 A) $6\sqrt{2}$ B) $-6\sqrt{2}$ C) $4\sqrt{5}$ D) $-4\sqrt{5}$

14. Hisoblang: $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$
 A) 2 B) $2\sqrt{3}$ C) $2\sqrt{2}$ D) $\sqrt{6}$

15. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) $\sqrt{2} + 1$ B) 1 C) $\sqrt{2} - 1$ D) 2

16. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

A) 1 B) 2 C) 4 D) 3

17. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

A) 3 B) 6 C) $6 + \sqrt{3}$ D) $6\sqrt{3}$

18. $4+2\sqrt{2}$ soniga teskari sonni toping.

A) $0,5-0,25\sqrt{2}$ B) $\frac{1}{4-2\sqrt{2}}$ C) $-4-2\sqrt{2}$ D) $4-2\sqrt{2}$

19. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
 A) -2 B) $2\sqrt{3}$ C) 2 D) $-2\sqrt{3}$

20. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$
 A) $-(\sqrt[3]{4}+1)^2$
 B) $\sqrt[3]{16}+1$
 C) $\sqrt[3]{4}$
 D) $(\sqrt[3]{4}+1)^2$

21. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$
 A) 22 B) 33 C) 11 D) 44

22. $4+2\sqrt{2}$ somiga teskari sonni toping.

A) $4-2\sqrt{2}$ B) $0,5-0,25\sqrt{2}$ C) $-4-2\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

23. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
 A) 1 B) $\sqrt[3]{2}$ C) $0,25\sqrt[3]{65}$ D) 1,5

24. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
 A) -240 B) -60 C) -120 D) -480

25. $\frac{\sqrt{1}+\sqrt{2}+\sqrt{3}+\dots+\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

A) 7 B) 2 C) 5 D) 3

26. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$
 A) $-(\sqrt[3]{4}+1)^2$
 B) $\sqrt[3]{4}$
 C) $-(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{16}+1$

27. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$$

A) $2a^2$ B) $2 - 2a^2$ C) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ D) 2

28. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

A) $6\sqrt{3}$ B) 12 C) 10 D) $5-3\sqrt{3}$

29. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

A) $\sqrt{2} + \sqrt{10}$
 B) $\sqrt{2} + \sqrt{3}$
 C) $\sqrt{2} + 1$
 D) $\sqrt{2} + \sqrt{5}$

30. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

A) 27 B) 3 C) 1 D) cheksiz ko'p

31. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

A) $\sqrt{2} + 1$ B) $\sqrt{2} - 1$ C) 1 D) 2

32. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$
 A) 22 B) 44 C) 33 D) 11

33. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

A) 3 B) 1 C) 2 D) 4

34. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{14}$
- B) $2\sqrt{7}$
- C) $2(2\sqrt{3}-\sqrt{7})$
- D) $-2(\sqrt{7}+2\sqrt{3})$

35. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

36. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{10}$
- B) $\sqrt{2}+1$
- C) $\sqrt{2}+\sqrt{3}$
- D) $\sqrt{2}+\sqrt{5}$

37. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3
- B) 5
- C) 4
- D) 8

38. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 20
- B) 18
- C) 10
- D) 16

39. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3
- B) -1
- C) 0
- D) 1

40. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$
- B) $2\sqrt{2}$
- C) $2\sqrt{3}$
- D) 2

41. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$

- A) 11
- B) 1
- C) 0
- D) $\sqrt{30}$

42. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7
- B) 8
- C) 6
- D) 9

43. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5
- B) $\sqrt{24}$
- C) 2
- D) 1

44. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 18
- B) 16
- C) 10
- D) 20

45. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 0
- B) 1
- C) 3
- D) 1

46. bu yerda $[a] = a$ sonining butun qismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50
- B) -105
- C) -62
- D) -124

47. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$

- A) 1
- B) 0
- C) $\sqrt{30}$
- D) 11

48. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5
- B) 1
- C) 2
- D) $\sqrt{24}$

49. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 6
- B) 8
- C) 4
- D) 5

50. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -120
- B) -480
- C) -240
- D) -60

51. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5
- B) 2
- C) 7
- D) 3

52. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1,5
- B) 0,25 $\sqrt[3]{65}$
- C) $\sqrt[3]{2}$
- D) 1

53. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}+\frac{1}{n+1}$
- B) $1-\frac{1}{n}-\frac{1}{n+1}$
- C) $1+\frac{1}{n}-\frac{1}{n+1}$
- D) $1+\frac{1}{n}+\frac{1}{n+1}$

54. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$
- B) 2
- C) $\sqrt{2}$
- D) $\sqrt[3]{2}$

55. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 4
- B) 5
- C) 6
- D) 8

56. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 5
- B) 8
- C) 3
- D) 4

57. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7
- B) 9
- C) 6
- D) 8

58. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $4\sqrt{5}$
- B) $-4\sqrt{5}$
- C) $-6\sqrt{2}$
- D) $6\sqrt{2}$

59. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $-2\sqrt{3}$
- B) 2
- C) $2\sqrt{3}$
- D) -2

60. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 5
- B) 1
- C) 25
- D) $\sqrt{4}$

O'quvchi 06 (7-A)

Variant: 6983E950 • Matematika • 7-A

1. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$
- B) $\sqrt[3]{4}$
- C) $-(\sqrt[3]{4} + 1)^2$
- D) $(\sqrt[3]{4} + 1)^2$

2. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
- B) $1 + \frac{1}{n} + \frac{1}{n+1}$
- C) $1 - \frac{1}{n} - \frac{1}{n+1}$
- D) $1 - \frac{1}{n} + \frac{1}{n+1}$

3. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 2
- B) 1
- C) $\sqrt{24}$
- D) 5

4. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\ldots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \ldots}}} = ?$

- A) 9
- B) 7
- C) 8
- D) 6

5. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}-1$
- B) 2
- C) 1
- D) $\sqrt{2}+1$

6. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} + \frac{1}{n+1}$
- B) $1 - \frac{1}{n} + \frac{1}{n+1}$
- C) $1 - \frac{1}{n} - \frac{1}{n+1}$
- D) $1 + \frac{1}{n} - \frac{1}{n+1}$

7. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 7
- B) 2
- C) 5
- D) 3

8. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
- B) $\sqrt{2}+1$
- C) $\sqrt{2}+\sqrt{10}$
- D) $\sqrt{2}+\sqrt{3}$

9. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62
- B) -50
- C) -124
- D) -105

10. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{6}}{3}$
- B) $\frac{\sqrt{2}}{2}$
- C) $\sqrt{2}$
- D) 2

11. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, a+b ni toping.

- A) 16
- B) 18
- C) 20
- D) 10

12. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$
- B) $\sqrt{6}$
- C) 2
- D) $2\sqrt{2}$

13. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3
- B) -1
- C) 0
- D) 1

14. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $2a^2$
- B) 2
- C) $\sqrt{a^4+1} - \sqrt{a^4-1}$
- D) $2-2a^2$

15. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -120
- B) -60
- C) -480
- D) -240

16. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 22
- B) 44
- C) 11
- D) 33

17. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- B) $\frac{\sqrt{y}-\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- D) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

18. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3
- B) 2
- C) 1
- D) 4

19. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\ldots}}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \ldots}}} = ?$

- A) 6
- B) 7
- C) 8
- D) 9

20. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27
- B) cheksiz ko'p
- C) 3
- D) 1

21. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}}$ • $(x^{\frac{1}{3}}-y^{\frac{1}{3}})$ • $\frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}$ • $(x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 5
- B) 8
- C) 6
- D) 4

22. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3
- B) 4
- C) 5
- D) 8

23. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62
- B) -50
- C) -124
- D) -105

24. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
- B) $\sqrt{2}+1$
- C) $\sqrt{2}+\sqrt{3}$
- D) $\sqrt{2}+\sqrt{10}$

25. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $4\sqrt{5}$
- B) $6\sqrt{2}$
- C) $-4\sqrt{5}$
- D) $-6\sqrt{2}$

26. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) 2
- B) $-2\sqrt{3}$
- C) -2
- D) $2\sqrt{3}$

27. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1
- B) 0,25
- C) $\sqrt[3]{2}$
- D) 1,5

28. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $-4-2\sqrt{2}$
- B) $\frac{1}{4-2\sqrt{2}}$
- C) $0,5-0,25\sqrt{2}$
- D) $4-2\sqrt{2}$

29. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4
- B) 1
- C) 3
- D) 2

30. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 3\sqrt{3}$

- A) 12
- B) $6\sqrt{3}$
- C) 10
- D) $5-3\sqrt{3}$

31. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, a+b ni toping.

- A) 18
- B) 20
- C) 10
- D) 16

32. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) 3
- B) 6
- C) $6\sqrt{3}$
- D) $6+\sqrt{3}$

33. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $6\sqrt{2}$
- B) $4\sqrt{5}$
- C) $-6\sqrt{2}$
- D) $-4\sqrt{5}$

34. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -480 B) -120 C) -60 D) -240

35. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) 2 B) $-2\sqrt{3}$ C) -2 D) $2\sqrt{3}$

36. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) 2 O'quvchilarim mazza qilsin: 2-Variant
 B) $\sqrt[3]{2}$
 C) $\sqrt{2}$
 D) $\sqrt[6]{2}$

37. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) $\sqrt{24}$ B) 1 C) 2 D) 5

38. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $2-2a^2$ B) $\sqrt{a^4+1}-\sqrt{a^4-1}$ C) 2 D) $2a^2$

39. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 D) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

40. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 33 B) 22 C) 11 D) 44

41. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 1 C) 1 D) 0

42. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt[3]{2}$ B) $\sqrt{2}$ C) 2 D) $\sqrt[6]{2}$

43. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 5 B) 8 C) 3 D) 4

44. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$

- A) 1 B) $\sqrt{30}$ C) 11 D) 0

45. $x^2+y^2+z^2=6x+8y+10z-50$ bo'lsa, x ni toping.

- A) 3 B) 27 C) 1 D) cheksiz ko'p

46. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{14}$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $2\sqrt{7}$
 D) $-2(\sqrt{7}+2\sqrt{3})$

47. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) $2\sqrt{2}$ C) 2 D) $2\sqrt{3}$

48. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $-(\sqrt[3]{4}+1)^2$
 B) $\sqrt[3]{4}$
 C) $(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{16}+1$

49. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{2}}{2}$ B) 2 C) $\sqrt{2}$ D) $\frac{\sqrt{6}}{3}$

50. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $0,25\sqrt[3]{65}$ B) $\sqrt[3]{2}$ C) 1 D) 1,5

51. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 25 B) 5 C) $\sqrt{4}$ D) 1

52. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $4-2\sqrt{2}$ C) $0,5-0,25\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

53. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2(2\sqrt{3}-\sqrt{7})$
 B) $-2(\sqrt{7}+2\sqrt{3})$
 C) $2\sqrt{14}$
 D) $2\sqrt{7}$

54. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$

- A) 1 B) 0 C) 11 D) $\sqrt{30}$

55. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiyamatini toping.

- A) 6 B) $6+\sqrt{3}$ C) 3 D) $6\sqrt{3}$

56. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) $\sqrt{4}$ B) 25 C) 1 D) 5

57. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3 B) 5 C) 7 D) 2

58. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 8 B) 4 C) 6 D) 5

59. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 2 B) $\sqrt{2}-1$ C) 1 D) $\sqrt{2}+1$

60. $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$

- A) $6\sqrt{3}$ B) $5-3\sqrt{3}$ C) 10 D) 12

O'quvchi 07 (7-A)

Variant: CC789F98 • Matematika • 7-A

1. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 1 C) 4 D) 2

2. Hisoblang: $\frac{\sqrt{5}-3\sqrt{2(6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$
A) $\sqrt{6}$ B) $2\sqrt{3}$ C) 2 D) $2\sqrt{2}$

3. Soddalashtiring: $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$
A) 1 B) 0 C) -1 D) 3

4. $4+2\sqrt{2}$ soniga teskari sonni toping.
A) $\frac{1}{4-2\sqrt{2}}$ B) $-4-2\sqrt{2}$ C) $0,5-0,25\sqrt{2}$ D) $4-2\sqrt{2}$

5. $a = \pi - e$, bo'lsha ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$
A) $2a^2$ B) $\sqrt{a^4+1}-\sqrt{a^4-1}$ C) $2-2a^2$ D) 2

6. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3 B) 5 C) 7 D) 2

7. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$
A) $\sqrt{2}+\sqrt{3}$
B) $\sqrt{2}+\sqrt{10}$
C) $\sqrt{2}+\sqrt{5}$
D) $\sqrt{2}+1$

8. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

9. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsha, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$
A) $4\sqrt{5}$ B) $-4\sqrt{5}$ C) $-6\sqrt{2}$ D) $6\sqrt{2}$

10. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsha, x va y ning o'rta arifmetigini toping.

- A) 5 B) 3 C) 8 D) 4

11. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5+3\sqrt{3}$
A) $5-3\sqrt{3}$ B) $6\sqrt{3}$ C) 12 D) 10

12. $x^2+y^2+z^2 = 6x+8y+10z-50$ bo'lsha, x ni toping.
A) 3 B) 1 C) cheksiz ko'p D) 27

13. Agar $a=39-\sqrt{432}$ bo'lsha, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.
A) $6+\sqrt{3}$ B) 6 C) $6\sqrt{3}$ D) 3

14. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
A) 1 B) 1,5 C) $\sqrt[3]{2}$ D) $0,25\sqrt[3]{14}$

15. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsha, a+b ni toping.
A) 18 B) 20 C) 10 D) 16

16. $\frac{\sqrt{0,5}}{\sqrt[3]{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt[3]{0,9+1,5}} = ?$
A) 1 B) $\sqrt[3]{24}$ C) 2 D) 5

17. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
A) $1-\frac{1}{n}-\frac{1}{n+1}$
B) $1-\frac{1}{n}+\frac{1}{n+1}$
C) $1+\frac{1}{n}+\frac{1}{n+1}$
D) $1+\frac{1}{n}-\frac{1}{n+1}$

18. Hisoblang: $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$
A) $2\sqrt{2}$ B) $\sqrt{6}$ C) 2 D) $2\sqrt{3}$

19. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$
A) 11 B) $\sqrt{30}$ C) 1 D) 0

20. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
A) 2 B) $\frac{\sqrt{6}}{3}$ C) $\frac{\sqrt{2}}{2}$ D) $\sqrt{2}$

21. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-3\sqrt{xy}+3\sqrt{y^2}}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$
A) 6 B) 4 C) 5 D) 8

22. Soddalashtiring: $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$
A) 1 B) 1 C) 0 D) 3

23. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
A) $-2\sqrt{3}$ B) 2 C) -2 D) $2\sqrt{3}$

24. Hisoblang: $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0,(22)}}}$
A) $2(2\sqrt{3}-\sqrt{7})$
B) $2\sqrt{14}$
C) $-2(\sqrt{7}+2\sqrt{3})$
D) $2\sqrt{7}$

25. $x^2+y^2+z^2 = 6x+8y+10z-50$ bo'lsha, x ni toping.
A) 3 B) 27 C) 1 D) cheksiz ko'p

26. $a = \pi - e$, bo'lsha ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$
A) $\sqrt{a^4+1}-\sqrt{a^4-1}$ B) 2 C) $2a^2$ D) $2-2a^2$

27. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$
A) 11 B) 33 C) 44 D) 22

28. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsha, x va y ning o'rta arifmetigini toping.

- A) 3 B) 4 C) 8 D) 5

29. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
A) -120 B) -60 C) -480 D) -240

30. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-3\sqrt{xy}+3\sqrt{y^2}}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$
A) 5 B) 6 C) 4 D) 8

31. Hisoblang: $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0,(22)}}}$
A) $-2(\sqrt{7}+2\sqrt{3})$
B) $2(2\sqrt{3}-\sqrt{7})$
C) $2\sqrt{14}$
D) $2\sqrt{7}$

32. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
A) $1-\frac{1}{n}+\frac{1}{n+1}$
B) $1+\frac{1}{n}-\frac{1}{n+1}$
C) $1+\frac{1}{n}+\frac{1}{n+1}$
D) $1-\frac{1}{n}-\frac{1}{n+1}$

33. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
A) $0,25\sqrt[3]{65}$ B) $\sqrt[3]{2}$ C) 1,5 D) 1

34. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5+3\sqrt{3}$
A) $5-3\sqrt{3}$ B) 10 C) $6\sqrt{3}$ D) 12

35. A = $\sqrt{2} - \sqrt[3]{2}$, B = $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C = $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[3]{2}$ B) $\sqrt{2}$ C) $\sqrt[6]{2}$ D) 2

36. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
A) $-2\sqrt{3}$ B) $2\sqrt{3}$ C) -2 D) 2

37. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2} + 1$ B) $\sqrt{2} - 1$ C) 1 D) 2

38. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 9 B) 6 C) 8 D) 7

39. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 6 B) 7 C) 8 D) 9

40. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

41. $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\dots\cdot\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 7 B) 5 C) 3 D) 2

42. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{3}$
B) $\sqrt{2} + \sqrt{5}$
C) $\sqrt{2} + \sqrt{10}$
D) $\sqrt{2} + 1$

43. A = $\sqrt{2} - \sqrt[3]{2}$, B = $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C = $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt{2}$
B) $\sqrt[3]{2}$
C) 2 O'quvchilarim mazza qilsin: 2-Variant
D) $\sqrt[6]{2}$

44. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4 B) 3 C) 2 D) 1

45. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 1 B) 25 C) 5 D) $\sqrt{4}$

46. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) 2 C) $\sqrt{2} - 1$ D) $\sqrt{2} + 1$

47. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
B) $\sqrt[3]{16}+1$
C) $\sqrt[3]{4}$
D) $-(\sqrt[3]{4}+1)^2$

48. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
B) $-(\sqrt[3]{4}+1)^2$
C) $\sqrt[3]{16}+1$
D) $\sqrt[3]{4}$

49. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -240 B) -480 C) -60 D) -120

50. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{2}}{2}$ B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) 2

51. bu yerda [a] – asoniningbutungqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -105 C) -124 D) -62

52. $\frac{\sqrt{0.5}}{\sqrt{2.4}} \bullet \left(\sqrt{\frac{1.2-0.7}{1.2+0.7}} + \sqrt{\frac{2.4+1.4}{2.4-1.4}} \right) \bullet \frac{\sqrt{1.5+0.4}}{\sqrt{0.9+1.5}} = ?$

- A) 2 B) 5 C) $\sqrt{24}$ D) 1

53. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 33 B) 44 C) 22 D) 11

54. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $0.5-0.25\sqrt{2}$ C) $4-2\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

55. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, a+b ni toping.

- A) 18 B) 10 C) 20 D) 16

56. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 11 B) 0 C) $\sqrt{30}$ D) 1

57. bu yerda [a] – asoniningbutungqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -124 C) -62 D) -105

58. Agar a=39 $-\sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) $6+\sqrt{3}$ B) 3 C) 6 D) $6\sqrt{3}$

59. x = $\sqrt{2}$ va y = $\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $-6\sqrt{2}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

60. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 1 B) $\sqrt{4}$ C) 25 D) 5

O'quvchi 08 (7-A)

Variant: 0E0C2542 • Matematika • 7-A

1. bu yerda $[a] - asoniningbutunqismi$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62 B) -105 C) -50 D) -124

2. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{2}}{2}$ B) 2 C) $\frac{\sqrt{6}}{3}$ D) $\sqrt{2}$

3. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) cheksiz ko'p B) 1 C) 3 D) 27

4. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) 10 C) $5-3\sqrt{3}$ D) 12

5. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
B) $1 + \frac{1}{n} + \frac{1}{n+1}$
C) $1 - \frac{1}{n} + \frac{1}{n+1}$
D) $1 - \frac{1}{n} - \frac{1}{n+1}$

6. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7} + 2\sqrt{3})$
B) $2\sqrt{14}$
C) $2(2\sqrt{3} - \sqrt{7})$
D) $2\sqrt{7}$

7. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 9 B) 8 C) 7 D) 6

8. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}-1$ B) 2 C) 1 D) $\sqrt{2}+1$

9. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt{2}$
B) $\sqrt[6]{2}$
C) $\sqrt[3]{2}$
D) 2

D) 2 O'quvchilarim mazza qilsin: 2-Variant

10. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$
B) $\sqrt[3]{4}$
C) $(\sqrt[3]{4} + 1)^2$
D) $-(\sqrt[3]{4} + 1)^2$

11. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4 B) 3 C) 1 D) 2

12. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 1 B) 0 C) $\sqrt{30}$ D) 11

13. $\frac{\sqrt{0,5}}{\sqrt[3]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \bullet \frac{\sqrt{1,5+0,4}}{\sqrt[3]{0,9+1,5}} = ?$

- A) $\sqrt{24}$ B) 5 C) 2 D) 1

14. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) -2 B) $-2\sqrt{3}$ C) $2\sqrt{3}$ D) 2

15. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 5 B) 8 C) 6 D) 4

16. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\sqrt{2}$ B) 2 C) $\frac{\sqrt{2}}{2}$ D) $\frac{\sqrt{6}}{3}$

17. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}+\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

18. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[3]{2}$ B) 2 C) $\sqrt[6]{2}$ D) $\sqrt{2}$

19. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 0,25 B) 1,5 C) $\sqrt[3]{2}$ D) 1

20. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 7 B) 6 C) 8 D) 9

21. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5 B) 3 C) 2 D) 7

22. Agar a=39 - $\sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) 3 B) 6 C) $6 + \sqrt{3}$ D) $6\sqrt{3}$

23. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 2 B) 4 C) 3 D) 1

24. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 - \frac{1}{n} - \frac{1}{n+1}$
B) $1 + \frac{1}{n} + \frac{1}{n+1}$
C) $1 - \frac{1}{n} + \frac{1}{n+1}$
D) $1 + \frac{1}{n} - \frac{1}{n+1}$

25. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60 B) -480 C) -240 D) -120

26. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $5-3\sqrt{3}$ B) 12 C) $6\sqrt{3}$ D) 10

27. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, a+b ni toping.

- A) 20 B) 16 C) 18 D) 10

28. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

29. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) 2 C) $\sqrt{2}+1$ D) $\sqrt{2}-1$

30. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 0 B) $\sqrt{30}$ C) 1 D) 11

31. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $-2\sqrt{3}$ B) -2 C) $2\sqrt{3}$ D) 2

32. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{5}$

- B) $\sqrt{2} + \sqrt{3}$

- C) $\sqrt{2} + 1$

- D) $\sqrt{2} + \sqrt{10}$

33. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) $2\sqrt{2}$ C) $2\sqrt{3}$ D) 2

34. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B) $\sqrt{24}$ C) 1 D) 2

35. bu yerda $[a] - asoniningbutunqismi$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -105 B) -62 C) -50 D) -124

36. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 1 C) 1 D) 0

37. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $2-2a^2$ B) $\sqrt{a^4+1}-\sqrt{a^4-1}$ C) $2a^2$ D) 2

38. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 20 B) 18 C) 10 D) 16

39. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $6\sqrt{2}$ B) $4\sqrt{5}$ C) $-6\sqrt{2}$ D) $-4\sqrt{5}$

40. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 7 B) 3 C) 2 D) 5

41. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 5 B) 6 C) 4 D) 8

42. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{7}$
B) $-2(\sqrt{7}+2\sqrt{3})$
C) $2\sqrt{14}$
D) $2(2\sqrt{3}-\sqrt{7})$

43. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $-6\sqrt{2}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

44. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

45. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) 3 B) 6 C) $6\sqrt{3}$ D) $6+\sqrt{3}$

46. $x^2+y^2+z^2 = 6x+8y+10z-50$ bo'lsa, x ni toping.

- A) 3 B) 27 C) 1 D) cheksiz ko'p

47. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -240 B) -120 C) -60 D) -480

48. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
B) $\sqrt[3]{4}$
C) $\sqrt[3]{16}+1$
D) $-(\sqrt[3]{4}+1)^2$

49. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) 2 B) $2\sqrt{3}$ C) $\sqrt{6}$ D) $2\sqrt{2}$

50. $x = n + \sqrt{n^2-16}$; $y = n - \sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 5 B) 3 C) 8 D) 4

51. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $0,25\sqrt[3]{65}$ B) 1 C) 1,5 D) $\sqrt[3]{2}$

52. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 33 B) 22 C) 44 D) 11

53. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 1 B) $\sqrt{4}$ C) 5 D) 25

54. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+1$
B) $\sqrt{2}+\sqrt{3}$
C) $\sqrt{2}+\sqrt{5}$
D) $\sqrt{2}+\sqrt{10}$

55. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

56. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) -1 C) 3 D) 0

57. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $\sqrt{a^4+1}-\sqrt{a^4-1}$ B) $2a^2$ C) $2-2a^2$ D) 2

58. $x = n + \sqrt{n^2-16}$; $y = n - \sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 4 D) 8

59. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 1 B) $\sqrt{4}$ C) 25 D) 5

60. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 11 B) 22 C) 44 D) 33

O'quvchi 09 (7-A)

Variant: 17EC5331 • Matematika • 7-A

1. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 5 B) 8 C) 4 D) 3

2. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 1 C) 2 D) 4

$$3. \frac{\sqrt{0.5}}{\sqrt[3]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt[3]{0,9+1,5}} = ?$$

- A) 1 B) $\sqrt{24}$ C) 5 D) 2

4. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $2-2a^2$ B) $\sqrt{a^4+1}-\sqrt{a^4-1}$ C) $2a^2$ D) 2

5. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[3]{2}$

B) 2 O'quvchilarim mazza qilsin: 2-Variant

- C) $\sqrt[6]{2}$

- D) $\sqrt{2}$

6. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$

- B) $\sqrt[3]{4}$

- C) $-(\sqrt[3]{4}+1)^2$

- D) $\sqrt[3]{16} + 1$

7. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 1 B) 27 C) 3 D) cheksiz ko'p

8. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 18 B) 10 C) 20 D) 16

9. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 2 B) $\sqrt{2} + 1$ C) 1 D) $\sqrt{2} - 1$

10. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt[3]{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt[3]{0,(22)}}}$

- A) $2\sqrt{7}$

- B) $-2(\sqrt{7} + 2\sqrt{3})$

- C) $2(2\sqrt{3} - \sqrt{7})$

- D) $2\sqrt{14}$

11. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $4\sqrt{5}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $-6\sqrt{2}$

12. $\frac{\sqrt{0.5}}{\sqrt[3]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt[3]{0,9+1,5}} = ?$

- A) 5 B) 1 C) 2 D) $\sqrt{24}$

13. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6} - \sqrt{5})^{-1}$

- A) $\sqrt{30}$ B) 1 C) 0 D) 11

14. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3 B) 5 C) 2 D) 7

15. Agar $a = 39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) 3 B) $6 + \sqrt{3}$ C) $6\sqrt{3}$ D) 6

16. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 22 B) 11 C) 44 D) 33

17. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $-6\sqrt{2}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

18. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) 10 C) $5-3\sqrt{3}$ D) $6\sqrt{3}$

19. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 1 B) 5 C) 25 D) $\sqrt{4}$

20. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\sqrt{\dots}}}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 9 B) 7 C) 8 D) 6

21. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$ B) -2 C) 2 D) $-2\sqrt{3}$

22. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) $5-3\sqrt{3}$ C) $6\sqrt{3}$ D) 10

23. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$

- B) $-(\sqrt[3]{4}+1)^2$

- C) $\sqrt[3]{4}$

- D) $(\sqrt[3]{4}+1)^2$

24. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) 0 C) 1 D) 3

25. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) $2\sqrt{2}$ C) 2 D) $\sqrt{6}$

26. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 22 B) 44 C) 11 D) 33

27. bu yerda $[a] = asoniningbutungismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62 B) -50 C) -124 D) -105

28. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) cheksiz ko'p B) 1 C) 27 D) 3

29. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + 1$

- B) $\sqrt{2} + \sqrt{3}$

- C) $\sqrt{2} + \sqrt{5}$

- D) $\sqrt{2} + \sqrt{10}$

30. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

- B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

- C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

- D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

31. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 16 B) 10 C) 20 D) 18

32. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt[3]{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt[3]{0,(22)}}}$

- A) $-2(\sqrt{7} + 2\sqrt{3})$

- B) $2\sqrt{14}$

- C) $2(2\sqrt{3} - \sqrt{7})$

- D) $2\sqrt{7}$

33. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 2 B) 1 C) 3 D) 4

34. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
- B) $1 - \frac{1}{n} + \frac{1}{n+1}$
- C) $1 + \frac{1}{n} + \frac{1}{n+1}$
- D) $1 - \frac{1}{n} - \frac{1}{n+1}$

35. A= $\sqrt{2} - \sqrt[3]{2}$, B = $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C = $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) 2
- B) $\sqrt{2}$
- C) $\sqrt[3]{2}$
- D) $\sqrt[6]{2}$

36. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$

- A) $\sqrt{30}$
- B) 0
- C) 11
- D) 1

37. Hisoblang: $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$
- B) $2\sqrt{2}$
- C) $2\sqrt{3}$
- D) 2

38. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}}-y^{\frac{1}{3}})$ • $\frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}}+y^{\frac{1}{3}})$ =?

- A) 6
- B) 5
- C) 8
- D) 4

39. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{2}}{2}$
- B) $\frac{\sqrt{6}}{3}$
- C) 2
- D) $\sqrt{2}$

40. bu yerda [a] – asonining butun qismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124
- B) -50
- C) -105
- D) -62

41. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{5}$
- B) $\sqrt{2} + 1$
- C) $\sqrt{2} + \sqrt{3}$
- D) $\sqrt{2} + \sqrt{10}$

42. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $4-2\sqrt{2}$
- B) $-4-2\sqrt{2}$
- C) $\frac{1}{4-2\sqrt{2}}$
- D) $0,5-0,25\sqrt{2}$

43. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) 2
- B) $2-2a^2$
- C) $2a^2$
- D) $\sqrt{a^4+1}-\sqrt{a^4-1}$

44. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 7
- B) 2
- C) 3
- D) 5

45. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60
- B) -120
- C) -240
- D) -480

46. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}}-y^{\frac{1}{3}})$ • $\frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}}+y^{\frac{1}{3}})$ =?

- A) 5
- B) 8
- C) 6
- D) 4

47. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}-1$
- B) $\sqrt{2}+1$
- C) 1
- D) 2

48. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7
- B) 8
- C) 6
- D) 9

49. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 5
- B) 1
- C) $\sqrt{4}$
- D) 25

50. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -480
- B) -60
- C) -240
- D) -120

51. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} + \frac{1}{n+1}$
- B) $1 - \frac{1}{n} + \frac{1}{n+1}$
- C) $1 + \frac{1}{n} - \frac{1}{n+1}$
- D) $1 - \frac{1}{n} - \frac{1}{n+1}$

52. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $4-2\sqrt{2}$
- B) $-4-2\sqrt{2}$
- C) $0,5-0,25\sqrt{2}$
- D) $\frac{1}{4-2\sqrt{2}}$

53. Agar a= $39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiyamatini toping.

- A) 3
- B) 6
- C) $6+\sqrt{3}$
- D) $6\sqrt{3}$

54. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $\sqrt[3]{2}$
- B) 1,5
- C) $0,25\sqrt[3]{65}$
- D) 1

55. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

56. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{2}}{2}$
- B) $\sqrt{2}$
- C) $\frac{\sqrt{6}}{3}$
- D) 2

57. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1
- B) 0
- C) -1
- D) 3

58. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$
- B) $-2\sqrt{3}$
- C) -2
- D) 2

59. x= $n + \sqrt{n^2 - 16}$; y= $n - \sqrt{n^2 - 16}$ va y=2 bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3
- B) 8
- C) 4
- D) 5

60. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1
- B) $0,25\sqrt[3]{65}$
- C) $\sqrt[3]{2}$
- D) 1,5

O'quvchi 10 (7-A)

Variant: 1837737B • Matematika • 7-A

1. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 2 B) 3 C) 1 D) 4

2. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 0 B) 1 C) 3 D) 1

3. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 6 B) 8 C) 5 D) 4

4. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 D) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

5. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
 B) $\sqrt[3]{16}+1$
 C) $-(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{4}$

6. $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$

- A) $6\sqrt{3}$ B) 10 C) 12 D) $5-3\sqrt{3}$

7. bu yerda $[a] - asoniningbutunqismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124 B) -50 C) -105 D) -62

8. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) cheksiz ko'p B) 3 C) 27 D) 1

9. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
 B) $1 - \frac{1}{n} + \frac{1}{n+1}$
 C) $1 - \frac{1}{n} - \frac{1}{n+1}$
 D) $1 + \frac{1}{n} + \frac{1}{n+1}$

10. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}-1$ B) 2 C) 1 D) $\sqrt{2}+1$

11. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 1 B) 2 C) 3 D) 4

12. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) $2\sqrt{3}$ C) 2 D) $2\sqrt{2}$

13. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{2}$ B) $2\sqrt{3}$ C) 2 D) $\sqrt{6}$

14. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7 B) 8 C) 6 D) 9

15. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$

- A) 2 B) $2-2a^2$ C) $2a^2$ D) $\sqrt{a^4+1}-\sqrt{a^4-1}$

16. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\sqrt{2}$ B) $\frac{\sqrt{6}}{3}$ C) $\frac{\sqrt{2}}{2}$ D) 2

17. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 7 C) 3 D) 5

18. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 20 B) 10 C) 18 D) 16

19. $\frac{\sqrt{0,5}}{\sqrt[4]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 2 B) $\sqrt{24}$ C) 5 D) 1

20. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 11 B) $\sqrt{30}$ C) 1 D) 0

21. Hisoblang: $(5^{\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 5 B) 25 C) 1 D) $\sqrt{4}$

22. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) -2 B) -2 $\sqrt{3}$ C) $2\sqrt{3}$ D) 2

23. $\frac{\sqrt{0,5}}{\sqrt[4]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B) 2 C) $\sqrt{24}$ D) 1

24. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$

- B) $2\sqrt{7}$

- C) $2\sqrt{14}$

- D) $2(2\sqrt{3}-\sqrt{7})$

25. Hisoblang: $(5^{\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) $\sqrt{4}$ B) 25 C) 5 D) 1

26. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 8 D) 4

27. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 22 B) 33 C) 11 D) 44

28. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 4 B) 6 C) 5 D) 8

29. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1,5 B) 1 C) $0,25\sqrt{65}$ D) $\sqrt[3]{2}$

30. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$

- B) $2(2\sqrt{3}-\sqrt{7})$

- C) $2\sqrt{7}$

- D) $2\sqrt{14}$

31. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $0,25\sqrt{65}$ B) $\sqrt[3]{2}$ C) 1 D) 1,5

32. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 3 B) 27 C) cheksiz ko'p D) 1

33. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) $6\sqrt{3}$ B) 6 C) 3 D) $6+\sqrt{3}$

34. bu yerda $[a] - asoniningbutunqismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -124 C) -62 D) -105

35. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiyamatini toping.

- A) 3 B) $6\sqrt{3}$ C) 6 D) $6+\sqrt{3}$

36. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $4-2\sqrt{2}$ C) $-4-2\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

37. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[a]{a} + \sqrt[b]{b}$ bo'lsa, $a+b$ ni toping.

- A) 20 B) 16 C) 18 D) 10

38. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $-6\sqrt{2}$ B) $-4\sqrt{5}$ C) $4\sqrt{5}$ D) $6\sqrt{2}$

39. $\frac{\sqrt{1}+\sqrt{2}+\sqrt{3}+\dots+\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysisi biriga teng.

- A) 3 B) 2 C) 7 D) 5

40. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60 B) -480 C) -240 D) -120

41. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 0 C) -1 D) 1

42. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{10}$
B) $\sqrt{2} + \sqrt{3}$
C) $\sqrt{2} + \sqrt{5}$
D) $\sqrt{2} + 1$

43. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} + \frac{1}{n+1}$
B) $1 - \frac{1}{n} + \frac{1}{n+1}$
C) $1 - \frac{1}{n} - \frac{1}{n+1}$
D) $1 + \frac{1}{n} - \frac{1}{n+1}$

44. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt[3]{2}$ B) $\sqrt[6]{2}$ C) $\sqrt{2}$ D) 2

45. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $6\sqrt{2}$ B) $-6\sqrt{2}$ C) $4\sqrt{5}$ D) $-4\sqrt{5}$

46. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $2a^2$ B) $2-2a^2$ C) $\sqrt{a^4+1}-\sqrt{a^4-1}$ D) 2

47. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
B) $\sqrt[3]{16}+1$
C) $\sqrt[3]{4}$
D) $-(\sqrt[3]{4}+1)^2$

48. Hisoblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 33 B) 44 C) 11 D) 22

49. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) 2 B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) $\frac{\sqrt{2}}{2}$

50. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 8 D) 4

51. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $-2\sqrt{3}$ B) 2 C) $2\sqrt{3}$ D) -2

52. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

53. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt{2}$
B) 2 O'quvchilarim mazza qilsin: 2-Variant
C) $\sqrt[3]{2}$
D) $\sqrt[6]{2}$

54. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7 B) 6 C) 9 D) 8

55. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $4-2\sqrt{2}$ B) $0,5-0,25\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $-4-2\sqrt{2}$

56. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 10 B) 12 C) $6\sqrt{3}$ D) $5-3\sqrt{3}$

57. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{10}$
B) $\sqrt{2} + \sqrt{5}$
C) $\sqrt{2} + \sqrt{3}$
D) $\sqrt{2} + 1$

58. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -120 B) -480 C) -240 D) -60

59. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 1 B) 11 C) $\sqrt{30}$ D) 0

60. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) $\sqrt{2}-1$ C) $\sqrt{2}+1$ D) 2

O'quvchi 11 (7-A)

Variant: FC22F217 • Matematika • 7-A

1. $a = \pi - e$, bo'lsa ifodani soddalashtiring.
 $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$
- A) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ B) 2 C) $2 - 2a^2$ D) $2a^2$
2. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
- A) $4\sqrt{5}$ B) $-6\sqrt{2}$ C) $-4\sqrt{5}$ D) $6\sqrt{2}$
3. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,6)}{3+6\sqrt{0,22)}}} - \sqrt{\frac{13+6\sqrt{4,6)}{3-6\sqrt{0,22)}}}$
- A) $2(2\sqrt{3} - \sqrt{7})$
B) $2\sqrt{7}$
C) $-2(\sqrt{7} + 2\sqrt{3})$
D) $2\sqrt{14}$
4. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
- A) -2 B) $2\sqrt{3}$ C) 2 D) $-2\sqrt{3}$
5. $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$
- A) 1 B) 11 C) $\sqrt{30}$ D) 0
6. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?
- A) 3 B) 4 C) 2 D) 1
7. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$
- A) $5-3\sqrt{3}$ B) 10 C) 12 D) $6\sqrt{3}$
8. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.
- A) 5 B) 2 C) 3 D) 7
9. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
- A) -120 B) -60 C) -240 D) -480
10. $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$
- A) 11 B) $\sqrt{30}$ C) 1 D) 0
11. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
- A) $-6\sqrt{2}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$
12. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$
- A) $\sqrt{2} + \sqrt{3}$
B) $\sqrt{2} + 1$
C) $\sqrt{2} + \sqrt{5}$
D) $\sqrt{2} + \sqrt{10}$
13. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$
- A) 22 B) 11 C) 33 D) 44
14. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.
- A) 16 B) 18 C) 20 D) 10
15. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
- A) 2 B) $-2\sqrt{3}$ C) $2\sqrt{3}$ D) -2
16. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
- A) 2 B) $\sqrt{24}$ C) 5 D) 1
17. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$
- A) 0 B) 1 C) -1 D) 3
18. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$
- A) 11 B) 22 C) 44 D) 33
19. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.
- A) 20 B) 10 C) 16 D) 18
20. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2} - \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2} + \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$
- A) 4 B) 8 C) 5 D) 6
21. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.
- A) 5 B) 7 C) 2 D) 3
22. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,6)}}{\sqrt{2}}$
- A) 2 B) $2\sqrt{2}$ C) $\sqrt{6}$ D) $2\sqrt{3}$
23. Hisoblang: $\sqrt[3]{5 + 2\sqrt{13}} + \sqrt[3]{5 - 2\sqrt{13}}$
- A) 1 B) 0,25 C) 1,5 D) $\sqrt[3]{2}$
24. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
- A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
25. $a = \pi - e$, bo'lsa ifodani soddalashtiring.
- $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$
- A) $2a^2$ B) 2 C) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ D) $2 - 2a^2$
26. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
- A) 2 B) $\frac{\sqrt{6}}{3}$ C) $\frac{\sqrt{2}}{2}$ D) $\sqrt{2}$
27. bu yerda $[a] = \text{asoniningbutungismi}$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$
- A) -105 B) -62 C) -50 D) -124
28. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
- A) 1 B) $\sqrt{24}$ C) 5 D) 2
29. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.
- A) $6 + \sqrt{3}$ B) 6 C) 3 D) $6\sqrt{3}$
30. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
- A) 2 B) $\sqrt{2} + 1$ C) $\sqrt{2} - 1$ D) 1
31. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,6)}}{\sqrt{2}}$
- A) $2\sqrt{2}$ B) $\sqrt{6}$ C) $2\sqrt{3}$ D) 2
32. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
- A) $\frac{\sqrt{2}}{2}$ B) $\frac{\sqrt{6}}{3}$ C) $\sqrt{2}$ D) 2
33. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.
- A) 1 B) 3 C) 27 D) cheksiz ko'p
34. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$
- A) $\sqrt{2} + \sqrt{5}$
B) $\sqrt{2} + \sqrt{3}$
C) $\sqrt{2} + 1$
D) $\sqrt{2} + \sqrt{10}$
35. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$
- A) $\sqrt[3]{16} + 1$
B) $(\sqrt[3]{4} + 1)^2$
C) $-(\sqrt[3]{4} + 1)^2$
D) $\sqrt[3]{4}$
36. $x = n + \sqrt{n^2 - 16}; y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.
- A) 8 B) 3 C) 5 D) 4

37. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 5 B) 1 C) 25 D) $\sqrt{4}$

38. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

39. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 8 B) 4 C) 6 D) 5

40. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{14}$
 B) $-2(\sqrt{7}+2\sqrt{3})$
 C) $2\sqrt{7}$
 D) $2(2\sqrt{3}-\sqrt{7})$

41. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $\frac{1}{4-2\sqrt{2}}$ B) $4-2\sqrt{2}$ C) $-4-2\sqrt{2}$ D) $0,5-0,25\sqrt{2}$

42. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 8 C) 3 D) 5

43. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 25 B) $\sqrt{4}$ C) 5 D) 1

44. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1,5 B) $\sqrt[3]{2}$ C) 1 D) $0,25\sqrt[3]{65}$

45. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 8 B) 6 C) 9 D) 7

46. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$ B) 2 C) $\sqrt[3]{2}$ D) $\sqrt{2}$

47. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 6 B) 8 C) 9 D) 7

48. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 1 C) 2 D) 4

49. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 1 C) 1 D) 0

50. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$
 B) $\sqrt[3]{2}$
 C) 2 O'quvchilarim mazza qilsin: 2-Variant
 D) $\sqrt{2}$

51. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $\frac{1}{4-2\sqrt{2}}$ C) $-4-2\sqrt{2}$ D) $4-2\sqrt{2}$

52. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}-\frac{1}{n+1}$
 B) $1+\frac{1}{n}-\frac{1}{n+1}$
 C) $1-\frac{1}{n}+\frac{1}{n+1}$
 D) $1+\frac{1}{n}+\frac{1}{n+1}$

53. $x^2+y^2+z^2=6x+8y+10z-50$ bo'lsa, x ni toping.

- A) 27 B) 3 C) cheksiz ko'p D) 1

54. bu yerda [a] – asonining butunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -105 B) -124 C) -62 D) -50

55. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}-1$ B) $\sqrt{2}+1$ C) 1 D) 2

56. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}-\frac{1}{n+1}$
 B) $1-\frac{1}{n}+\frac{1}{n+1}$
 C) $1+\frac{1}{n}+\frac{1}{n+1}$
 D) $1+\frac{1}{n}-\frac{1}{n+1}$

57. Agar a=39- $\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) $6\sqrt{3}$ B) 3 C) $6+\sqrt{3}$ D) 6

58. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 10 B) $5-3\sqrt{3}$ C) $6\sqrt{3}$ D) 12

59. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -240 B) -480 C) -60 D) -120

60. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16}+1$
 B) $\sqrt[3]{4}$
 C) $(\sqrt[3]{4}+1)^2$
 D) $-(\sqrt[3]{4}+1)^2$

O'quvchi 12 (7-A)

Variant: 78995A61 • Matematika • 7-A

1. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 8 D) 4

2. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) $\sqrt{6}$ C) $2\sqrt{2}$ D) 2

3. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$
B) $\sqrt[3]{4}$
C) $-(\sqrt[3]{4} + 1)^2$
D) $(\sqrt[3]{4} + 1)^2$

4. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

5. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} + \frac{1}{n+1}$
B) $1 + \frac{1}{n} - \frac{1}{n+1}$
C) $1 - \frac{1}{n} - \frac{1}{n+1}$
D) $1 - \frac{1}{n} + \frac{1}{n+1}$

6. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -124 C) -62 D) -105

7. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$$

- A) 2 B) $2a^2$ C) $2 - 2a^2$ D) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$

8. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{5}$
B) $\sqrt{2} + 1$
C) $\sqrt{2} + \sqrt{3}$
D) $\sqrt{2} + \sqrt{10}$

9. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2(2\sqrt{3} - \sqrt{7})$
B) $-2(\sqrt{7} + 2\sqrt{3})$
C) $2\sqrt{7}$
D) $2\sqrt{14}$

10. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 1 B) $\sqrt{24}$ C) 5 D) 2

11. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

12. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) $6 + \sqrt{3}$ B) 3 C) $6\sqrt{3}$ D) 6

13. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 4 B) 8 C) 5 D) 6

14. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -480 B) -120 C) -60 D) -240

15. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1,5 B) $\sqrt[3]{2}$ C) 0,25 $\sqrt[3]{65}$ D) 1

16. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -62 C) -124 D) -105

17. Hisoblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 11 B) 33 C) 44 D) 22

18. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $-4\sqrt{5}$ B) $6\sqrt{2}$ C) $4\sqrt{5}$ D) $-6\sqrt{2}$

19. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5 B) 2 C) 3 D) 7

20. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4} + 1)^2$
B) $\sqrt[3]{4}$
C) $-(\sqrt[3]{4} + 1)^2$
D) $\sqrt[3]{16} + 1$

21. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7} + 2\sqrt{3})$
B) $2\sqrt{14}$
C) $2(2\sqrt{3} - \sqrt{7})$
D) $2\sqrt{7}$

22. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 5 B) 1 C) 25 D) $\sqrt{4}$

23. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3 B) 2 C) 7 D) 5

24. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) 2 B) $\frac{\sqrt{2}}{2}$ C) $\frac{\sqrt{6}}{3}$ D) $\sqrt{2}$

25. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, $a+b$ ni toping.

- A) 10 B) 18 C) 20 D) 16

26. $\sqrt{\sqrt{241 + 44\sqrt{30}}} - (\sqrt{6} - \sqrt{5})^{-1}$

- A) $\sqrt{30}$ B) 11 C) 0 D) 1

27. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 1 B) 5 C) $\sqrt{4}$ D) 25

28. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2} - 1$ B) 1 C) 2 D) $\sqrt{2} + 1$

29. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{3}$
B) $\sqrt{2} + \sqrt{10}$
C) $\sqrt{2} + 1$
D) $\sqrt{2} + \sqrt{5}$

30. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$
B) $\sqrt{2}$
C) 2 O'quvchilarim mazza qilsin: 2-Variant
D) $\sqrt[3]{2}$

31. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) 6 B) $6 + \sqrt{3}$ C) $6\sqrt{3}$ D) 3

32. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 2 B) 1 C) 4 D) 3

33. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $\frac{1}{4-2\sqrt{2}}$ B) $4-2\sqrt{2}$ C) $0,5-0,25\sqrt{2}$ D) $-4-2\sqrt{2}$

34. Hisoblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 11 B) 22 C) 33 D) 44

35. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 2 B) $\sqrt{2}-1$ C) $\sqrt{2}+1$ D) 1

36. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 8 C) 5 D) 3

37. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) $\sqrt{24}$ B) 1 C) 2 D) 5

38. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 1 B) cheksiz ko'p C) 27 D) 3

39. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) 10 C) $6\sqrt{3}$ D) $5-3\sqrt{3}$

40. $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 6 B) 8 C) 7 D) 9

41. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $-2\sqrt{3}$ B) 2 C) -2 D) $2\sqrt{3}$

42. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, a+b ni toping.

- A) 18 B) 16 C) 20 D) 10

43. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{2}$ B) $\sqrt{6}$ C) $2\sqrt{3}$ D) 2

44. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

45. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $6\sqrt{2}$ B) $4\sqrt{5}$ C) $-4\sqrt{5}$ D) $-6\sqrt{2}$

46. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 6 B) 4 C) 5 D) 8

47. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$

- A) 0 B) 11 C) 1 D) $\sqrt{30}$

48. $a = \pi - e$, bo'lса ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)} + a^2(a+1)+1 - \sqrt{a^2(a^2+a-1)} - a^2(a+1)+1$$

- A) 2 B) $2-2a^2$ C) $2a^2$ D) $\sqrt{a^4+1} - \sqrt{a^4-1}$

49. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 9 B) 7 C) 8 D) 6

50. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt[3]{2}$ B) $\sqrt{2}$ C) 2 D) $\sqrt[6]{2}$

51. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) 2 B) $\sqrt{2}$ C) $\frac{\sqrt{2}}{2}$ D) $\frac{\sqrt{6}}{3}$

52. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 - \frac{1}{n} + \frac{1}{n+1}$

- B) $1 + \frac{1}{n} + \frac{1}{n+1}$

- C) $1 + \frac{1}{n} - \frac{1}{n+1}$

- D) $1 - \frac{1}{n} - \frac{1}{n+1}$

53. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) -2 B) $-2\sqrt{3}$ C) 2 D) $2\sqrt{3}$

54. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 0 B) 1 C) 1 D) 3

55. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 0 C) 1 D) -1

56. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) 12 C) $5-3\sqrt{3}$ D) 10

57. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) cheksiz ko'p C) 1 D) 3

58. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 1 B) 4 C) 2 D) 3

59. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $0,25\sqrt[3]{65}$ B) 1 C) $1,5$ D) $\sqrt[3]{2}$

60. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -240 B) -60 C) -120 D) -480

O'quvchi 13 (7-A)

Variant: 71A41C63 • Matematika • 7-A

1. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$
 A) $5 - 3\sqrt{3}$ B) 10 C) 12 D) $6\sqrt{3}$
2. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?
 A) 1 B) 3 C) 2 D) 4
3. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
 A) $4\sqrt{5}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $-6\sqrt{2}$
4. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?
 A) 3 B) 1 C) 4 D) 2
5. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.
 A) $\sqrt[6]{2}$
 B) 2 O'quvchilarim mazza qilsin: 2-Variant
 C) $\sqrt{2}$
 D) $\sqrt[3]{2}$
6. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
 A) $2\sqrt{3}$ B) $-2\sqrt{3}$ C) 2 D) -2
7. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$
 A) $5 - 3\sqrt{3}$ B) 10 C) 12 D) $6\sqrt{3}$
8. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
 A) $\sqrt{24}$ B) 5 C) 2 D) 1
9. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$
 A) $\sqrt{2} + \sqrt{10}$
 B) $\sqrt{2} + \sqrt{3}$
 C) $\sqrt{2} + \sqrt{5}$
 D) $\sqrt{2} + 1$
10. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
 A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
11. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
 A) -240 B) -480 C) -60 D) -120
12. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $-2(\sqrt{7} + 2\sqrt{3})$
 B) $2\sqrt{7}$
 C) $2(2\sqrt{3} - \sqrt{7})$
 D) $2\sqrt{14}$
13. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$
 A) 25 B) 5 C) $\sqrt{4}$ D) 1
14. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$
 A) 22 B) 33 C) 44 D) 11
15. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.
 A) 3 B) 1 C) cheksiz ko'p D) 27
16. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.
 A) 20 B) 18 C) 10 D) 16
17. $a = \pi - e$, bo'lsa ifodani soddalashtiring.
 $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$
 A) $2 - 2a^2$ B) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ C) $2a^2$ D) 2
18. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) 1 B) $\sqrt{2} - 1$ C) 2 D) $\sqrt{2} + 1$
19. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
 A) -120 B) -240 C) -60 D) -480
20. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
 A) $1 + \frac{1}{n} - \frac{1}{n+1}$
 B) $1 - \frac{1}{n} - \frac{1}{n+1}$
 C) $1 + \frac{1}{n} + \frac{1}{n+1}$
 D) $1 - \frac{1}{n} + \frac{1}{n+1}$
21. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$
 A) $\sqrt{2} + \sqrt{5}$
 B) $\sqrt{2} + \sqrt{10}$
 C) $\sqrt{2} + 1$
 D) $\sqrt{2} + \sqrt{3}$
22. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$
 A) 5 B) $\sqrt{4}$ C) 1 D) 25
23. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.
 A) 3 B) 27 C) cheksiz ko'p D) 1
24. $a = \pi - e$, bo'lsa ifodani soddalashtiring.
 $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$
 A) $2 - 2a^2$ B) 2 C) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ D) $2a^2$
25. $\sqrt{\sqrt{241 + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}}$
 A) 0 B) 1 C) 11 D) $\sqrt{30}$
26. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) 2 B) $\sqrt{2} + 1$ C) 1 D) $\sqrt{2} - 1$
27. Hisoblang: $\sqrt[3]{5 + 2\sqrt{13}} + \sqrt[3]{5 - 2\sqrt{13}}$
 A) $\sqrt[3]{2}$ B) 1,5 C) 1 D) $0,25\sqrt[3]{65}$
28. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$
 A) 11 B) 44 C) 33 D) 22
29. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
 A) 2 B) $\sqrt{6}$ C) $2\sqrt{3}$ D) $2\sqrt{2}$
30. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$
 A) 4 B) 8 C) 6 D) 5
31. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) 2 B) $\frac{\sqrt{6}}{3}$ C) $\frac{\sqrt{2}}{2}$ D) $\sqrt{2}$
32. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$
 A) 6 B) 5 C) 4 D) 8
33. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.
 A) 10 B) 20 C) 16 D) 18
34. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$
 A) 1 B) 0 C) 1 D) 3

35. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
- B) $-(\sqrt[3]{4}+1)^2$
- C) $(\sqrt[3]{4}+1)^2$
- D) $\sqrt[3]{16}+1$

36. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) 3
- B) 6
- C) $6\sqrt{3}$
- D) $6+\sqrt{3}$

37. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}-\frac{1}{n+1}$
- B) $1+\frac{1}{n}-\frac{1}{n+1}$
- C) $1-\frac{1}{n}+\frac{1}{n+1}$
- D) $1+\frac{1}{n}+\frac{1}{n+1}$

38. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) 2
- B) $2\sqrt{2}$
- C) $\sqrt{6}$
- D) $2\sqrt{3}$

39. bu yerda $[a] = \text{asoniningbutunqismi}$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62
- B) -105
- C) -50
- D) -124

40. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 8
- B) 4
- C) 5
- D) 3

41. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$
- B) $4-2\sqrt{2}$
- C) $-4-2\sqrt{2}$
- D) $\frac{1}{4-2\sqrt{2}}$

42. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$

- A) $\sqrt{30}$
- B) 1
- C) 0
- D) 11

43. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3
- B) 4
- C) 8
- D) 5

44. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3
- B) 1
- C) 0
- D) -1

45. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{7}$
- B) $2\sqrt{14}$
- C) $2(2\sqrt{3}-\sqrt{7})$
- D) $-2(\sqrt{7}+2\sqrt{3})$

46. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5
- B) $\sqrt{24}$
- C) 1
- D) 2

47. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
- B) $\sqrt[3]{4}$
- C) $-(\sqrt[3]{4}+1)^2$
- D) $\sqrt[3]{16}+1$

48. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 6
- B) 8
- C) 9
- D) 7

49. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

50. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $6\sqrt{2}$
- B) $4\sqrt{5}$
- C) $-6\sqrt{2}$
- D) $-4\sqrt{5}$

51. $A=\sqrt{2}-\sqrt[3]{2}$, $B=\sqrt[3]{2}+\sqrt[3]{2}+1$ va $C=\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiyatini toping.

- A) $\sqrt[3]{2}$
- B) 2
- C) $\sqrt[6]{2}$
- D) $\sqrt{2}$

52. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) 2
- B) $\frac{\sqrt{6}}{3}$
- C) $\frac{\sqrt{2}}{2}$
- D) $\sqrt{2}$

53. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) 2
- B) -2
- C) $2\sqrt{3}$
- D) $-2\sqrt{3}$

54. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7
- B) 8
- C) 9
- D) 6

55. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiyatini toping.

- A) 3
- B) $6+\sqrt{3}$
- C) 6
- D) $6\sqrt{3}$

56. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5
- B) 3
- C) 7
- D) 2

57. bu yerda $[a] = \text{asoniningbutunqismi}$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124
- B) -62
- C) -105
- D) -50

58. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3
- B) 5
- C) 7
- D) 2

59. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$
- B) $\frac{1}{4-2\sqrt{2}}$
- C) $0,5-0,25\sqrt{2}$
- D) $4-2\sqrt{2}$

60. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $\sqrt[3]{2}$
- B) 1,5
- C) 1
- D) $0,25\sqrt[3]{65}$

O'quvchi 14 (7-A)

Variant: 8E0B1E36 • Matematika • 7-A

1. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
 A) $0,25\sqrt[3]{65}$ B) 1,5 C) $\sqrt[3]{2}$ D) 1
2. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) $\frac{\sqrt{2}}{2}$ B) 2 C) $\frac{\sqrt{6}}{3}$ D) $\sqrt{2}$
3. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) $\sqrt{2}-1$ B) $\sqrt{2}+1$ C) 1 D) 2
4. Hisoblang: $\frac{3}{2\sqrt[3]{2+2\sqrt[3]{4}}} - \frac{3}{2\sqrt[3]{2-2\sqrt[3]{4}}} + \sqrt[3]{4}$
 A) $-(\sqrt[3]{4}+1)^2$
 B) $(\sqrt[3]{4}+1)^2$
 C) $\sqrt[3]{4}$
 D) $\sqrt[3]{16}+1$
5. bu yerda $[a] = \text{asoniningbutunqismi } [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$
 A) -105 B) -124 C) -50 D) -62
6. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$
 A) $-4\sqrt{5}$ B) $4\sqrt{5}$ C) $-6\sqrt{2}$ D) $6\sqrt{2}$
7. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?
 A) 2 B) 3 C) 4 D) 1
8. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.
 A) 3 B) $6+\sqrt{3}$ C) 6 D) $6\sqrt{3}$
9. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$
 A) $\sqrt{30}$ B) 0 C) 1 D) 11
10. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$
 A) 9 B) 6 C) 7 D) 8
11. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
 A) $2\sqrt{2}$ B) $2\sqrt{3}$ C) $\sqrt{6}$ D) 2
12. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.
 A) 2 B) $\sqrt[6]{2}$ C) $\sqrt{2}$ D) $\sqrt[3]{2}$
13. Soddalashtiring: $\frac{(a+2)\sqrt{a+1}(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$
 A) 0 B) -1 C) 1 D) 3
14. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
 A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
15. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$
 A) 11 B) 1 C) 0 D) $\sqrt{30}$
16. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.
 A) 3 B) 8 C) 4 D) 5
17. $a=\pi-e$, bo'lsa ifodani soddalashtiring.
 $\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$
 A) $2a^2$ B) $2-2a^2$ C) $\sqrt{a^4+1}-\sqrt{a^4-1}$ D) 2
18. Bunda x=8 va y=2 $\sqrt{2} \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$
 A) 8 B) 6 C) 5 D) 4
19. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt{a}+\sqrt{b}$ bo'lsa, a+b ni toping.
 A) 10 B) 18 C) 20 D) 16
20. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
 A) -2 B) $2\sqrt{3}$ C) $-2\sqrt{3}$ D) 2
21. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$
 A) $\sqrt{2}+1$
 B) $\sqrt{2}+\sqrt{5}$
 C) $\sqrt{2}+\sqrt{3}$
 D) $\sqrt{2}+\sqrt{10}$
22. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $2\sqrt{7}$
 B) $2\sqrt{14}$
 C) $2(2\sqrt{3}-\sqrt{7})$
 D) $-2(\sqrt{7}+2\sqrt{3})$
23. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?
 A) 3 B) 2 C) 1 D) 4
24. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
 A) -120 B) -240 C) -480 D) -60
25. $a=\pi-e$, bo'lsa ifodani soddalashtiring.
 $\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$
 A) $2a^2$ B) 2 C) $\sqrt{a^4+1}-\sqrt{a^4-1}$ D) $2-2a^2$
26. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.
 A) 8 B) 4 C) 3 D) 5
27. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
 A) $1+\frac{1}{n}-\frac{1}{n+1}$
 B) $1-\frac{1}{n}+\frac{1}{n+1}$
 C) $1+\frac{1}{n}+\frac{1}{n+1}$
 D) $1-\frac{1}{n}-\frac{1}{n+1}$
28. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
 A) 1,5 B) 1 C) $\sqrt[3]{2}$ D) $0,25\sqrt[3]{65}$
29. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
 A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
30. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$
 A) $5-3\sqrt{3}$ B) 12 C) $6\sqrt{3}$ D) 10
31. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
 A) $\sqrt{24}$ B) 5 C) 2 D) 1
32. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
 A) $1-\frac{1}{n}-\frac{1}{n+1}$
 B) $1-\frac{1}{n}+\frac{1}{n+1}$
 C) $1+\frac{1}{n}-\frac{1}{n+1}$
 D) $1+\frac{1}{n}+\frac{1}{n+1}$

33. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62 B) -105 C) -50 D) -124

34. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$ B) 2 C) $-2\sqrt{3}$ D) -2

35. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 5 B) 1 C) 25 D) $\sqrt{4}$

36. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 6 B) 7 C) 8 D) 9

37. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$
B) $2(2\sqrt{3}-\sqrt{7})$
C) $2\sqrt{14}$
D) $2\sqrt{7}$

38. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $4-2\sqrt{2}$ C) $-4-2\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

39. A = $\sqrt{2} - \sqrt[3]{2}$, B = $\sqrt[3]{2} + \sqrt[4]{2} + 1$ va C = $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$
B) $\sqrt[3]{2}$
C) $\sqrt{2}$
D) 2 O'quvchilarim mazza qilsin: 2-Variant

40. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 20 B) 16 C) 10 D) 18

41. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{5}$
B) $\sqrt{2} + \sqrt{10}$
C) $\sqrt{2} + 1$
D) $\sqrt{2} + \sqrt{3}$

42. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) cheksiz ko'p C) 3 D) 1

43. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 3 C) 7 D) 5

44. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$
B) $\sqrt[3]{4}$
C) $(\sqrt[3]{4} + 1)^2$
D) $-(\sqrt[3]{4} + 1)^2$

45. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 22 B) 44 C) 33 D) 11

46. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 3 C) 7 D) 5

47. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60 B) -240 C) -120 D) -480

48. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \bullet \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 2 B) 5 C) $\sqrt{24}$ D) 1

49. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 8 B) 6 C) 5 D) 4

50. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 44 B) 11 C) 22 D) 33

51. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 3 B) 1 C) 27 D) cheksiz ko'p

52. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\sqrt{2}$ B) $\frac{\sqrt{2}}{2}$ C) 2 D) $\frac{\sqrt{6}}{3}$

53. $\sqrt{22 - 30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) 10 C) $5-3\sqrt{3}$ D) $6\sqrt{3}$

54. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $4-2\sqrt{2}$ C) $0,5-0,25\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

55. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2} + 1$ B) 2 C) $\sqrt{2} - 1$ D) 1

56. Agar a=39 – $\sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) $6\sqrt{3}$ B) 3 C) 6 D) $6+\sqrt{3}$

57. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) $\sqrt{4}$ B) 25 C) 1 D) 5

58. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) 3 C) 1 D) 0

59. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) 2 C) $\sqrt{6}$ D) $2\sqrt{2}$

60. x= $\sqrt{2}$ va y= $\sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $6\sqrt{2}$ B) $-6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

O'quvchi 15 (7-A)

Variant: D64FD0F9 • Matematika • 7-A

1. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$ • $(x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 6 B) 5 C) 4 D) 8

2. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

A) $2a^2$ B) $2-2a^2$ C) 2 D) $\sqrt{a^4+1}-\sqrt{a^4-1}$

3. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\sqrt{2}$ B) 2 C) $\frac{\sqrt{2}}{2}$ D) $\frac{\sqrt{6}}{3}$

4. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) $2\sqrt{2}$ C) 2 D) $\sqrt{6}$

5. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1+\frac{1}{n}+\frac{1}{n+1}$
B) $1+\frac{1}{n}-\frac{1}{n+1}$
C) $1-\frac{1}{n}-\frac{1}{n+1}$
D) $1-\frac{1}{n}+\frac{1}{n+1}$

6. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) $6+\sqrt{3}$ B) 3 C) $6\sqrt{3}$ D) 6

7. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 7 B) 8 C) 6 D) 9

8. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 11 B) 44 C) 22 D) 33

9. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$

- A) 0 B) 11 C) 1 D) $\sqrt{30}$

10. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{2}}{2}$ B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) 2

11. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 18 B) 10 C) 16 D) 20

12. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $\frac{1}{4-2\sqrt{2}}$ B) $0,5-0,25\sqrt{2}$ C) $4-2\sqrt{2}$ D) $-4-2\sqrt{2}$

13. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 6 B) 7 C) 9 D) 8

14. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $-2\sqrt{3}$ B) 2 C) -2 D) $2\sqrt{3}$

15. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) cheksiz ko'p C) 1 D) 3

16. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2(2\sqrt{3}-\sqrt{7})$
B) $2\sqrt{14}$
C) $-2(\sqrt{7}+2\sqrt{3})$
D) $2\sqrt{7}$

17. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $(\sqrt[3]{4}+1)^2$
B) $\sqrt[3]{16}+1$
C) $-(\sqrt[3]{4}+1)^2$
D) $\sqrt[3]{4}$

18. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 5 C) 8 D) 3

19. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
B) $\sqrt{2}+1$
C) $\sqrt{2}+\sqrt{3}$
D) $\sqrt{2}+\sqrt{10}$

20. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2(2\sqrt{3}-\sqrt{7})$
B) $2\sqrt{7}$
C) $2\sqrt{14}$
D) $-2(\sqrt{7}+2\sqrt{3})$

21. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$ B) 2 C) $-2\sqrt{3}$ D) -2

22. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$

- A) $\sqrt{30}$ B) 1 C) 11 D) 0

23. Soddalashtiring: $\frac{\frac{\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

24. bu yerda $[a] = asoniningbutungqismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62 B) -50 C) -124 D) -105

25. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[3]{2}$ B) $\sqrt{2}$ C) $\sqrt[6]{2}$ D) 2

26. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 33 B) 44 C) 22 D) 11

27. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 6 B) 5 C) 8 D) 4

28. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B) 2 C) 1 D) $\sqrt{24}$

29. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
B) $\sqrt[3]{16}+1$
C) $(\sqrt[3]{4}+1)^2$
D) $-(\sqrt[3]{4}+1)^2$

30. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.

- A) 10 B) 18 C) 16 D) 20

31. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

32. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 7 C) 5 D) 3

33. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $6\sqrt{2}$ B) $-6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

34. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiyamatini toping.

- A) $6\sqrt{3}$ B) 3 C) $6+\sqrt{3}$ D) 6

35. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) $6\sqrt{3}$ C) $5-3\sqrt{3}$ D) 10

36. bu yerda $[a] = \text{asoniningbutunqismi}$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124 B) -105 C) -62 D) -50

37. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 1 B) $\sqrt{4}$ C) 25 D) 5

38. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 2 B) 3 C) 1 D) 4

39. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 - \frac{1}{n} - \frac{1}{n+1}$
B) $1 + \frac{1}{n} + \frac{1}{n+1}$
C) $1 - \frac{1}{n} + \frac{1}{n+1}$
D) $1 + \frac{1}{n} - \frac{1}{n+1}$

40. Hisoblang: $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$

- A) 2 B) $\sqrt{6}$ C) $2\sqrt{3}$ D) $2\sqrt{2}$

41. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4 B) 3 C) 1 D) 2

42. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) $\sqrt{2}-1$ C) $\sqrt{2}+1$ D) 2

43. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}+1$ B) $\sqrt{2}-1$ C) 2 D) 1

44. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 5 B) $\sqrt{4}$ C) 1 D) 25

45. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5 B) 7 C) 3 D) 2

46. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$

- A) $2-2a^2$ B) $2a^2$ C) $\sqrt{a^4+1}-\sqrt{a^4-1}$ D) 2

47. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

48. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt{2}$
B) 2 O'quvchilarim mazza qilsin: 2-Variant
C) $\sqrt[6]{2}$
D) $\sqrt[3]{2}$

49. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 0 C) -1 D) 1

50. $\frac{\sqrt{0,5}}{\sqrt[4]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt[4]{0,9+1,5}} = ?$

- A) 5 B) 2 C) 1 D) $\sqrt{24}$

51. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) 0 C) 1 D) 3

52. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $-6\sqrt{2}$ B) $6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

53. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1 B) $1,5$ C) $0,25\sqrt[3]{65}$ D) $\sqrt[3]{2}$

54. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $\sqrt[3]{2}$ B) $1,5$ C) $0,25\sqrt[3]{65}$ D) 1

55. Hisoblang: $\left(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}} \right) \bullet \left(\sqrt{96} + \sqrt{\left(\frac{1}{24} \right)^{-2}} \right)$

- A) -240 B) -120 C) -480 D) -60

56. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) 3 C) 1 D) cheksiz ko'p

57. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 5 C) 3 D) 8

58. Hisoblang: $\left(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}} \right) \bullet \left(\sqrt{96} + \sqrt{\left(\frac{1}{24} \right)^{-2}} \right)$

- A) -120 B) -480 C) -240 D) -60

59. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+1$
B) $\sqrt{2}+\sqrt{10}$
C) $\sqrt{2}+\sqrt{5}$
D) $\sqrt{2}+\sqrt{3}$

60. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) $5-3\sqrt{3}$ C) 10 D) $6\sqrt{3}$

O'quvchi 16 (7-A)

Variant: 842251FC • Matematika • 7-A

1. Hisoblang: $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0,(22)}}}$
- A) $2\sqrt{7}$
B) $2\sqrt{14}$
C) $2(2\sqrt{3}-\sqrt{7})$
D) $-2(\sqrt{7}+2\sqrt{3})$
2. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.
- A) 3 B) 8 C) 5 D) 4
3. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?
- A) 2 B) 1 C) 4 D) 3
4. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.
- A) 2 B) $\sqrt[6]{2}$ C) $\sqrt{2}$ D) $\sqrt[3]{2}$
5. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
- A) $6\sqrt{2}$ B) $-4\sqrt{5}$ C) $-6\sqrt{2}$ D) $4\sqrt{5}$
6. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.
- A) $6 + \sqrt{3}$ B) $6\sqrt{3}$ C) 3 D) 6
7. Hisoblang: $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$
- A) $\sqrt{6}$ B) $2\sqrt{3}$ C) $2\sqrt{2}$ D) 2
8. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$
- A) $-(\sqrt[3]{4}+1)^2$
B) $(\sqrt[3]{4}+1)^2$
C) $\sqrt[3]{16}+1$
D) $\sqrt[3]{4}$
9. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
- A) 2 B) $-2\sqrt{3}$ C) -2 D) $2\sqrt{3}$
10. $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$
- A) 11 B) 1 C) $\sqrt{30}$ D) 0
11. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$
- A) 44 B) 11 C) 22 D) 33
12. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$
- A) -105 B) -62 C) -50 D) -124
13. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.
- A) 5 B) 3 C) 4 D) 8
14. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
- A) $0,25\sqrt[3]{65}$ B) $\sqrt[3]{2}$ C) 1 D) $1,5$
15. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
- A) 2 B) $\sqrt{2}$ C) $\frac{\sqrt{2}}{2}$ D) $\frac{\sqrt{6}}{3}$
16. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
- A) $\frac{\sqrt{6}}{3}$ B) $\sqrt{2}$ C) 2 D) $\frac{\sqrt{2}}{2}$
17. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.
- A) 2 B) 5 C) 3 D) 7
18. $4+2\sqrt{2}$ somiga teskari sonni toping.
- A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$
19. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$
- A) 12 B) $6\sqrt{3}$ C) 10 D) $5-3\sqrt{3}$
20. $4+2\sqrt{2}$ soniga teskari sonni toping.
- A) $\frac{1}{4-2\sqrt{2}}$ B) $-4-2\sqrt{2}$ C) $4-2\sqrt{2}$ D) $0,5-0,25\sqrt{2}$
21. bu yerda [a] – asoniningbutunqismi $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$
- A) -105 B) -124 C) -50 D) -62
22. Hisoblang: $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0,(22)}}}$
- A) $-2(\sqrt{7}+2\sqrt{3})$
B) $2\sqrt{7}$
C) $2\sqrt{14}$
D) $2(2\sqrt{3}-\sqrt{7})$
23. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$
- A) 25 B) 1 C) 5 D) $\sqrt{4}$
24. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$
- A) 9 B) 8 C) 6 D) 7
25. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$
- A) 9 B) 8 C) 7 D) 6
26. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2} - \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2} + \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$
- A) 6 B) 5 C) 4 D) 8
27. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
- A) $-4\sqrt{5}$ B) $4\sqrt{5}$ C) $-6\sqrt{2}$ D) $6\sqrt{2}$
28. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$
- A) 22 B) 44 C) 11 D) 33
29. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
- A) $-2\sqrt{3}$ B) $2\sqrt{3}$ C) -2 D) 2
30. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$
- A) $-(\sqrt[3]{4}+1)^2$
B) $\sqrt[3]{16}+1$
C) $(\sqrt[3]{4}+1)^2$
D) $\sqrt[3]{4}$
31. $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$
- A) $\sqrt{30}$ B) 11 C) 1 D) 0
32. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashiring
- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
B) $1 - \frac{1}{n} - \frac{1}{n+1}$
C) $1 + \frac{1}{n} + \frac{1}{n+1}$
D) $1 - \frac{1}{n} + \frac{1}{n+1}$
33. Soddalashiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$
- A) 0 B) 1 C) 1 D) 3
34. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$
- A) $\sqrt{2} + \sqrt{3}$
B) $\sqrt{2} + \sqrt{10}$
C) $\sqrt{2} + 1$
D) $\sqrt{2} + \sqrt{5}$

35. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\frac{(\sqrt{5})^{-2}}{2}}$

- A) 25 B) 1 C) 5 D) $\sqrt{4}$

36. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \bullet \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) $\sqrt{24}$ B) 2 C) 5 D) 1

37. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60 B) -240 C) -480 D) -120

38. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) 0 C) 3 D) -1

39. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}+1$ B) 1 C) $\sqrt{2}-1$ D) 2

40. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 3 B) 1 C) 27 D) cheksiz ko'p

41. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[3]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 16 B) 20 C) 18 D) 10

42. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt{2}$
B) $\sqrt[3]{2}$
C) $\sqrt[6]{2}$

D) 2 O'quvchilarim mazza qilsin: 2-Variant

43. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 1 B) 4 C) 2 D) 3

44. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) 2 C) $2\sqrt{2}$ D) $2\sqrt{3}$

45. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) 12 C) $5-3\sqrt{3}$ D) 10

46. Bunda x=8 va y= $2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2} - \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2} + \sqrt[3]{xy} + \sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 5 B) 4 C) 8 D) 6

47. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

48. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 3 B) 7 C) 5 D) 2

49. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

50. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \bullet \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 2 B) 5 C) 1 D) $\sqrt{24}$

51. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[3]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 18 B) 20 C) 10 D) 16

52. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 - \frac{1}{n} + \frac{1}{n+1}$
B) $1 + \frac{1}{n} + \frac{1}{n+1}$
C) $1 + \frac{1}{n} - \frac{1}{n+1}$
D) $1 - \frac{1}{n} - \frac{1}{n+1}$

53. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -120 B) -480 C) -240 D) -60

54. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}+1$ B) 1 C) 2 D) $\sqrt{2}-1$

55. Agar a=39 - $\sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodanining qiymatini toping.

- A) 3 B) $6 + \sqrt{3}$ C) $6\sqrt{3}$ D) 6

56. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$$

- A) 2 B) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ C) $2a^2$ D) $2 - 2a^2$

57. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$$

- A) 2 B) $2 - 2a^2$ C) $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$ D) $2a^2$

58. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 3 B) cheksiz ko'p C) 1 D) 27

59. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{3}$
B) $\sqrt{2} + \sqrt{10}$
C) $\sqrt{2} + \sqrt{5}$
D) $\sqrt{2} + 1$

60. Hisoblang: $\sqrt[3]{5 + 2\sqrt{13}} + \sqrt[3]{5 - 2\sqrt{13}}$

- A) $\sqrt[3]{2}$ B) $0,25\sqrt[3]{65}$ C) 1 D) 1,5

O'quvchi 17 (7-A)

Variant: C1345E69 • Matematika • 7-A

1. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) 3 B) $6\sqrt{3}$ C) 6 D) $6+\sqrt{3}$

2. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $0,25\sqrt[3]{65}$ B) 1,5 C) 1 D) $\sqrt[3]{2}$

3. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $-4\sqrt{5}$ B) $4\sqrt{5}$ C) $-6\sqrt{2}$ D) $6\sqrt{2}$

4. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 44 B) 22 C) 33 D) 11

5. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet \left(x^{\frac{1}{3}} - y^{\frac{1}{3}} \right) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \bullet \left(x^{\frac{1}{3}} + y^{\frac{1}{3}} \right) = ?$

- A) 8 B) 6 C) 4 D) 5

6. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

7. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $2-2a^2$ B) $2a^2$ C) 2 D) $\sqrt{a^4+1}-\sqrt{a^4-1}$

8. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4 B) 1 C) 2 D) 3

9. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$$

- A) $\sqrt{a^4+1}-\sqrt{a^4-1}$ B) $2a^2$ C) 2 D) $2-2a^2$

10. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
B) $\sqrt{2}+\sqrt{3}$
C) $\sqrt{2}+\sqrt{10}$
D) $\sqrt{2}+1$

11. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1,5 B) $\sqrt[3]{2}$ C) $0,25\sqrt[3]{65}$ D) 1

12. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$ B) $\sqrt[3]{2}$ C) $\sqrt{2}$ D) 2

13. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) 10 C) 12 D) $5-3\sqrt{3}$

14. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $4-2\sqrt{2}$ B) $-4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $0,5-0,25\sqrt{2}$

15. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{6}}{3}$ B) $\sqrt{2}$ C) $\frac{\sqrt{2}}{2}$ D) 2

16. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
B) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

17. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6}-\sqrt{5})^{-1}$

- A) 1 B) 0 C) $\sqrt{30}$ D) 11

18. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 3 C) 5 D) 7

19. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 25 B) $\sqrt{4}$ C) 5 D) 1

20. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$

- B) $2\sqrt{7}$

- C) $2(2\sqrt{3}-\sqrt{7})$

- D) $2\sqrt{14}$

21. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) $2\sqrt{3}$ C) $2\sqrt{2}$ D) 2

22. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 8 B) 3 C) 5 D) 4

23. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 10 B) 20 C) 18 D) 16

24. bu yerda $[a] = asoniningbutungismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -62 B) -50 C) -124 D) -105

25. bu yerda $[a] = asoniningbutungismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50 B) -105 C) -62 D) -124

26. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 11 B) 44 C) 33 D) 22

27. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $5-3\sqrt{3}$ B) 10 C) 12 D) $6\sqrt{3}$

28. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 1 B) $\sqrt{4}$ C) 25 D) 5

29. Hisoblang: $(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -240 B) -60 C) -480 D) -120

30. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) 2 O'quvchilarim mazza qilsin: 2-Variant

- B) $\sqrt{2}$

- C) $\frac{\sqrt{2}}{2}$

- D) $\frac{3}{2}\sqrt{2}$

31. $x=n+\sqrt{n^2-16}$; $y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 3 B) 5 C) 8 D) 4

32. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1+\frac{1}{n}-\frac{1}{n+1}$

- B) $1-\frac{1}{n}+\frac{1}{n+1}$

- C) $1+\frac{1}{n}+\frac{1}{n+1}$

- D) $1-\frac{1}{n}-\frac{1}{n+1}$

33. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}+1$ B) 2 C) $\sqrt{2}-1$ D) 1

34. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) 2 C) $\sqrt{2}+1$ D) $\sqrt{2}-1$

35. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) 2 C) $2\sqrt{2}$ D) $\sqrt{6}$

36. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{16} + 1$
- B) $-(\sqrt[3]{4} + 1)^2$
- C) $\sqrt[3]{4}$
- D) $(\sqrt[3]{4} + 1)^2$

37. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -60
- B) -120
- C) -480
- D) -240

38. Hisoblang: $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0(22)}}}$

- A) $2\sqrt{14}$
- B) $2(2\sqrt{3} - \sqrt{7})$
- C) $2\sqrt{7}$
- D) $-2(\sqrt{7} + 2\sqrt{3})$

39. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $-4\sqrt{5}$
- B) $-6\sqrt{2}$
- C) $4\sqrt{5}$
- D) $6\sqrt{2}$

40. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$
- B) $-2\sqrt{3}$
- C) 2
- D) -2

41. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1
- B) 0
- C) 3
- D) 1

42. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- D) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

43. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 0
- B) -1
- C) 1
- D) 3

44. $\sqrt[3]{4}\sqrt{2\sqrt[3]{4\sqrt{2}\dots}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 8
- B) 9
- C) 7
- D) 6

45. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 11
- B) 0
- C) $\sqrt{30}$
- D) 1

46. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiyamatini toping.

- A) 6
- B) 3
- C) $6+\sqrt{3}$
- D) $6\sqrt{3}$

47. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 2
- B) 1
- C) $\sqrt{24}$
- D) 5

48. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
- B) $1 + \frac{1}{n} + \frac{1}{n+1}$
- C) $1 - \frac{1}{n} + \frac{1}{n+1}$
- D) $1 - \frac{1}{n} - \frac{1}{n+1}$

49. $\sqrt[3]{4}\sqrt{2\sqrt[3]{4\sqrt{2}\dots}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 9
- B) 7
- C) 6
- D) 8

50. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[a]{a} + \sqrt[b]{b}$ bo'lsa, $a+b$ ni toping.

- A) 18
- B) 16
- C) 10
- D) 20

51. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) cheksiz ko'p
- B) 27
- C) 1
- D) 3

52. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{6}}{3}$
- B) $\frac{\sqrt{2}}{2}$
- C) $\sqrt{2}$
- D) 2

53. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3
- B) 1
- C) 4
- D) 2

54. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $-(\sqrt[3]{4}+1)^2$
- B) $\sqrt[3]{4}$
- C) $(\sqrt[3]{4}+1)^2$
- D) $\sqrt[3]{16}+1$

55. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27
- B) 1
- C) cheksiz ko'p
- D) 3

56. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) $\sqrt{24}$
- B) 2
- C) 1
- D) 5

57. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$
- B) 2
- C) -2
- D) $-2\sqrt{3}$

58. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5
- B) 3
- C) 7
- D) 2

59. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{3}$
- B) $\sqrt{2} + 1$
- C) $\sqrt{2} + \sqrt{10}$
- D) $\sqrt{2} + \sqrt{5}$

60. Bunda $x=8$ va $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 5
- B) 4
- C) 8
- D) 6

O'quvchi 18 (7-A)

Variant: 3AE07CE9 • Matematika • 7-A

1. $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$
 A) 1 B) 11 C) 0 D) $\sqrt{30}$

2. Hisoblang: $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$
 A) 25 B) 1 C) $\sqrt{4}$ D) 5

3. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring
 A) $1+\frac{1}{n}+\frac{1}{n+1}$
 B) $1-\frac{1}{n}+\frac{1}{n+1}$
 C) $1-\frac{1}{n}-\frac{1}{n+1}$
 D) $1+\frac{1}{n}-\frac{1}{n+1}$

4. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) $\sqrt{2}$ B) 2 C) $\frac{\sqrt{2}}{2}$ D) $\frac{\sqrt{6}}{3}$

5. $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\ldots\cdot\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysisi biriga teng.

A) 3 B) 7 C) 2 D) 5

6. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}}=\sqrt[4]{a}+\sqrt[4]{b}$ bo'lsa, a+b ni toping.
 A) 16 B) 18 C) 20 D) 10

7. $\sqrt{8+2\sqrt{10+2\sqrt{5}}}+\sqrt{8-2\sqrt{10+2\sqrt{5}}}=?$
 A) $\sqrt{2}+1$
 B) $\sqrt{2}+\sqrt{10}$
 C) $\sqrt{2}+\sqrt{5}$
 D) $\sqrt{2}+\sqrt{3}$

8. $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$
 A) 10 B) 12 C) $5-3\sqrt{3}$ D) $6\sqrt{3}$

9. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}}\bullet(x^{\frac{1}{3}}-y^{\frac{1}{3}})\bullet\frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}\bullet(x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$
 A) 8 B) 4 C) 6 D) 5

10. Agar a=39- $\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.
 A) 3 B) 6 C) $6\sqrt{3}$ D) $6+\sqrt{3}$

11. Hisoblang: $(\frac{10}{\sqrt{6+1}}+\frac{2}{\sqrt{6-2}}-\frac{6}{3-\sqrt{6}})\bullet(\sqrt{96}+\sqrt{(\frac{1}{24})^{-2}})$
 A) -60 B) -480 C) -120 D) -240

12. Hisoblang: $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$
 A) 1 B) $\sqrt{4}$ C) 5 D) 25

13. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}}-\frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}}+\sqrt[3]{4}$
 A) $\sqrt[3]{16}+1$
 B) $-(\sqrt[3]{4}+1)^2$
 C) $\sqrt[3]{4}$
 D) $(\sqrt[3]{4}+1)^2$

14. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

A) $\sqrt[3]{2}$ B) $\sqrt{2}$ C) 2 D) $\sqrt[6]{2}$

15. $x^2+y^2+z^2=6x+8y+10z-50$ bo'lsa, x ni toping.

A) cheksiz ko'p B) 1 C) 3 D) 27

16. Hisoblang: $(\frac{10}{\sqrt{6+1}}+\frac{2}{\sqrt{6-2}}-\frac{6}{3-\sqrt{6}})\bullet(\sqrt{96}+\sqrt{(\frac{1}{24})^{-2}})$
 A) -60 B) -120 C) -240 D) -480

17. Bunda x=8 va y= $2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}}\bullet(x^{\frac{1}{3}}-y^{\frac{1}{3}})\bullet\frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}\bullet(x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$

A) 4 B) 5 C) 6 D) 8

18. bu yerda [a] – asonining butunqismi $[-\sqrt{20}]+[-\sqrt{21}]+[-\sqrt{22}]+\dots+[-\sqrt{40}]$

A) -50 B) -62 C) -105 D) -124

19. Agar a=39- $\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

A) 3 B) $6+\sqrt{3}$ C) 6 D) $6\sqrt{3}$

20. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

A) 1 B) 2 C) $\sqrt{2}+1$ D) $\sqrt{2}-1$

21. $a=\pi-e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)}+a^2(a+1)+1-\sqrt{a^2(a^2+a-1)}-a^2(a+1)+1$
 A) 2 B) $2-2a^2$ C) $2a^2$ D) $\sqrt{a^4+1}-\sqrt{a^4-1}$

22. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}+\sqrt{30+\sqrt{30+\sqrt{30+\dots}}}=?$
 A) 6 B) 9 C) 8 D) 7

23. $x=n+\sqrt{n^2-16}; y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

A) 4 B) 3 C) 5 D) 8

24. A= $\sqrt{2}-\sqrt[3]{2}$, B= $\sqrt[3]{2}+\sqrt[6]{2}+1$ va C= $\sqrt{2}-1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

A) $\sqrt{2}$
 B) $\sqrt[6]{2}$
 C) 2 O'quvchilarim mazza qilsin: 2-Variant
 D) $\sqrt[3]{2}$

25. $x=n+\sqrt{n^2-16}; y=n-\sqrt{n^2-16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

A) 8 B) 4 C) 5 D) 3

26. $x^2+y^2+z^2=6x+8y+10z-50$ bo'lsa, x ni toping.
 A) 27 B) 3 C) cheksiz ko'p D) 1

27. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}}+\frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
 A) 2 B) $2\sqrt{2}$ C) $2\sqrt{3}$ D) $\sqrt{6}$

28. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}}+\frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
 A) 2 B) $\sqrt{6}$ C) $2\sqrt{3}$ D) $2\sqrt{2}$

29. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2}-\sqrt{9x^2-12xy+4y^2}=?$

A) $6\sqrt{2}$ B) $-6\sqrt{2}$ C) $-4\sqrt{5}$ D) $4\sqrt{5}$

30. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}}:\frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
 A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

31. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

A) $1-\frac{1}{n}+\frac{1}{n+1}$
 B) $1+\frac{1}{n}+\frac{1}{n+1}$
 C) $1-\frac{1}{n}-\frac{1}{n+1}$
 D) $1+\frac{1}{n}-\frac{1}{n+1}$

32. $a=\pi-e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)}+a^2(a+1)+1-\sqrt{a^2(a^2+a-1)}-a^2(a+1)+1$
 A) 2 B) $\sqrt{a^4+1}-\sqrt{a^4-1}$ C) $2-2a^2$ D) $2a^2$

33. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

A) 3 B) 4 C) 1 D) 2

34. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- B) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- C) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

35. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
 A) $\frac{\sqrt{2}}{2}$ B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) 2

36. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$
 A) 12 B) $5-3\sqrt{3}$ C) 10 D) $6\sqrt{3}$

37. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$
 A) 22 B) 44 C) 33 D) 11

38. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $4-2\sqrt{2}$ C) $-4-2\sqrt{2}$ D) $\frac{1}{4-2\sqrt{2}}$

39. Hisoblang: $\frac{3}{2\sqrt{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$
 A) $-(\sqrt[3]{4}+1)^2$
 B) $(\sqrt[3]{4}+1)^2$
 C) $\sqrt[3]{16}+1$
 D) $\sqrt[3]{4}$

40. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
 A) 2 B) $-2\sqrt{3}$ C) -2 D) $2\sqrt{3}$

41. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$
 A) 1 B) 0 C) $\sqrt{30}$ D) 11

42. bu yerda $[a] = a \sin \pi n + b \cos \pi n$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$
 A) -105 B) -50 C) -124 D) -62

43. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
 A) 1 B) $\sqrt{2}+1$ C) 2 D) $\sqrt{2}-1$

44. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5}+0,4}{\sqrt{0,9+1,5}} = ?$
 A) $\sqrt{24}$ B) 2 C) 5 D) 1

45. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$
 A) $2\sqrt{7}$
 B) $2\sqrt{14}$
 C) $-2(\sqrt{7}+2\sqrt{3})$
 D) $2(2\sqrt{3}-\sqrt{7})$

46. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$
 A) 1 B) $\sqrt[3]{2}$ C) $0,25\sqrt[3]{65}$ D) 1,5

47. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \cdot \frac{\sqrt{1,5}+0,4}{\sqrt{0,9+1,5}} = ?$

- A) 2 B) 1 C) 5 D) $\sqrt{24}$

48. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
 A) $2\sqrt{3}$ B) $-2\sqrt{3}$ C) -2 D) 2

49. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $\frac{1}{4-2\sqrt{2}}$ B) $0,5-0,25\sqrt{2}$ C) $-4-2\sqrt{2}$ D) $4-2\sqrt{2}$

50. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2(2\sqrt{3}-\sqrt{7})$
 B) $-2(\sqrt{7}+2\sqrt{3})$
 C) $2\sqrt{14}$
 D) $2\sqrt{7}$

51. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) 0 C) 3 D) 1

52. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) -1 B) 3 C) 0 D) 1

53. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) $\sqrt[3]{2}$ B) 1 C) $0,25\sqrt[3]{65}$ D) 1,5

54. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 2 C) 1 D) 4

55. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[3]{a} + \sqrt[3]{b}$ bo'lsa, a+b ni toping.

- A) 18 B) 10 C) 20 D) 16

56. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2}\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 9 B) 7 C) 6 D) 8

57. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $-4\sqrt{5}$ B) $4\sqrt{5}$ C) $-6\sqrt{2}$ D) $6\sqrt{2}$

58. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{10}$
 B) $\sqrt{2}+\sqrt{5}$
 C) $\sqrt{2}+1$
 D) $\sqrt{2}+\sqrt{3}$

59. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 33 B) 44 C) 11 D) 22

60. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\dots\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 5 B) 7 C) 3 D) 2

O'quvchi 19 (7-A)

Variant: 0D970E41 • Matematika • 7-A

1. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[6]{2}$
- B) $\sqrt{2}$
- C) $\sqrt[3]{2}$
- D) 2 O'quvchilarim mazza qilsin: 2-Variant

2. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
- B) $\sqrt[3]{16} + 1$
- C) $-(\sqrt[3]{4} + 1)^2$
- D) $(\sqrt[3]{4} + 1)^2$

3. $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\dots\cdot\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2
- B) 5
- C) 3
- D) 7

4. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 22
- B) 33
- C) 44
- D) 11

5. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2} + 1$
- B) 2
- C) $\sqrt{2} - 1$
- D) 1

6. bu yerda $[a] = asoniningbutunqismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -124
- B) -50
- C) -105
- D) -62

7. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{7}$
- B) $-2(\sqrt{7} + 2\sqrt{3})$
- C) $2(2\sqrt{3} - \sqrt{7})$
- D) $2\sqrt{14}$

8. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4
- B) 3
- C) 8
- D) 5

9. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) $\sqrt{4}$
- B) 25
- C) 1
- D) 5

10. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 10
- B) $6\sqrt{3}$
- C) $5-3\sqrt{3}$
- D) 12

11. $\sqrt{\sqrt{241 + 44\sqrt{30}}} - (\sqrt{6} - \sqrt{5})^{-1}$

- A) 11
- B) 1
- C) 0
- D) $\sqrt{30}$

12. $A = \sqrt{2} - \sqrt[3]{2}$, $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$ va $C = \sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiymatini toping.

- A) $\sqrt[3]{2}$
- B) $\sqrt[6]{2}$
- C) 2
- D) $\sqrt{2}$

13. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- A) 25
- B) 5
- C) 1
- D) $\sqrt{4}$

14. Hisoblang: $\sqrt[3]{5 + 2\sqrt{13}} + \sqrt[3]{5 - 2\sqrt{13}}$

- A) 0,25 $\sqrt[3]{65}$
- B) $\sqrt[3]{2}$
- C) 1
- D) 1,5

15. $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$

- A) $\sqrt{2} + \sqrt{10}$
- B) $\sqrt{2} + \sqrt{5}$
- C) $\sqrt{2} + \sqrt{3}$
- D) $\sqrt{2} + 1$

16. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) cheksiz ko'p
- B) 1
- C) 3
- D) 27

17. $\frac{\sqrt{0,5}}{\sqrt[4]{2,4}} \bullet \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}} \right) \bullet \frac{\sqrt{1,5+0,4}}{\sqrt[4]{0,9+1,5}} = ?$

- A) $\sqrt{24}$
- B) 1
- C) 5
- D) 2

18. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
- B) $(\sqrt[3]{4} + 1)^2$
- C) $-(\sqrt[3]{4} + 1)^2$
- D) $\sqrt[3]{16} + 1$

19. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
- B) $1 - \frac{1}{n} + \frac{1}{n+1}$
- C) $1 - \frac{1}{n} - \frac{1}{n+1}$
- D) $1 + \frac{1}{n} + \frac{1}{n+1}$

20. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $-4\sqrt{5}$
- B) $-6\sqrt{2}$
- C) $6\sqrt{2}$
- D) $4\sqrt{5}$

21. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 7
- B) 6
- C) 8
- D) 9

22. Hisoblang: $\sqrt[3]{5 + 2\sqrt{13}} + \sqrt[3]{5 - 2\sqrt{13}}$

- A) 0,25 $\sqrt[3]{65}$
- B) 1,5
- C) 1
- D) $\sqrt[3]{2}$

23. Agar $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt{a} + \sqrt{b}$ bo'lsa, a+b ni toping.

- A) 18
- B) 16
- C) 20
- D) 10

24. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) 2
- B) $2\sqrt{3}$
- C) $-2\sqrt{3}$
- D) -2

25. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) -1
- B) 1
- C) 0
- D) 3

26. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) $6 + \sqrt{3}$
- B) $6\sqrt{3}$
- C) 6
- D) 3

27. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- B) $\frac{\sqrt{y}-\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

28. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 6
- B) 4
- C) 5
- D) 8

29. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 4
- B) 2
- C) 1
- D) 3

30. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 5
- B) 4
- C) 8
- D) 6

31. bu yerda $[a] = asoniningbutunqismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -50
- B) -62
- C) -124
- D) -105

32. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4
- B) 8
- C) 3
- D) 5

33. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 1 B) 4 C) 2 D) 3

34. $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) $6\sqrt{3}$ B) $5-3\sqrt{3}$ C) 12 D) 10

35. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
A) $\frac{\sqrt{2}}{2}$ B) 2 C) $\sqrt{2}$ D) $\frac{\sqrt{6}}{3}$

36. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $0,5-0,25\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $4-2\sqrt{2}$

37. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{14}$
B) $-2(\sqrt{7}+2\sqrt{3})$
C) $2(2\sqrt{3}-\sqrt{7})$
D) $2\sqrt{7}$

38. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$
A) $-2\sqrt{3}$ B) -2 C) $2\sqrt{3}$ D) 2

39. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
A) $2\sqrt{3}$ B) 2 C) $2\sqrt{2}$ D) $\sqrt{6}$

40. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$
A) 0 B) 1 C) 3 D) 1

41. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
A) -120 B) -60 C) -480 D) -240

42. $\frac{\sqrt{0,5}}{\sqrt{2},4} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
A) 1 B) $\sqrt{24}$ C) 5 D) 2

43. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$
A) $-6\sqrt{2}$ B) $4\sqrt{5}$ C) $-4\sqrt{5}$ D) $6\sqrt{2}$

44. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$
A) 8 B) 7 C) 6 D) 9

45. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.
A) 1 B) $\sqrt{2}+1$ C) $\sqrt{2}-1$ D) 2

46. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, $a+b$ ni toping.
A) 18 B) 10 C) 20 D) 16

47. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
B) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
D) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

48. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
A) -120 B) -240 C) -480 D) -60

49. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1+\frac{1}{n} + \frac{1}{n+1}$
B) $1-\frac{1}{n} + \frac{1}{n+1}$
C) $1+\frac{1}{n} - \frac{1}{n+1}$
D) $1-\frac{1}{n} - \frac{1}{n+1}$

50. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
B) $\sqrt{2}+\sqrt{10}$
C) $\sqrt{2}+1$
D) $\sqrt{2}+\sqrt{3}$

51. $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6}-\sqrt{5})^{-1}}$

- A) 1 B) $\sqrt{30}$ C) 0 D) 11

52. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$
A) 2 B) $\sqrt{2}$ C) $\frac{\sqrt{6}}{3}$ D) $\frac{\sqrt{2}}{2}$

53. Hisoblang: $\frac{\sqrt{5-3\sqrt{2,(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,(6)}}}{\sqrt{2}}$
A) $\sqrt{6}$ B) $2\sqrt{2}$ C) 2 D) $2\sqrt{3}$

54. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $-4-2\sqrt{2}$ B) $0,5-0,25\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $4-2\sqrt{2}$

55. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 2 B) 3 C) 7 D) 5

56. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)} + a^2(a+1)+1 - \sqrt{a^2(a^2+a-1)} - a^2(a+1)+1$$

- A) 2 B) $2-2a^2$ C) $\sqrt{a^4+1} - \sqrt{a^4-1}$ D) $2a^2$

57. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$$\sqrt{a^2(a^2-a+1)} + a^2(a+1)+1 - \sqrt{a^2(a^2+a-1)} - a^2(a+1)+1$$

- A) $\sqrt{a^4+1} - \sqrt{a^4-1}$ B) 2 C) $2-2a^2$ D) $2a^2$

58. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 1 B) 27 C) cheksiz ko'p D) 3

59. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiymatini toping.

- A) 6 B) 3 C) $6\sqrt{3}$ D) $6+\sqrt{3}$

60. Hisodblang: $\sqrt{11} \bullet (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- A) 22 B) 33 C) 44 D) 11

O'quvchi 20 (7-A)

Variant: 9381F3DE • Matematika • 7-A

1. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 3 B) 1 C) -1 D) 0

2. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 2 B) 1 C) 3 D) 4

3. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\sqrt{2}$ B) $\frac{\sqrt{2}}{2}$ C) $\frac{\sqrt{6}}{3}$ D) 2

4. Hisoblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 11 B) 22 C) 44 D) 33

5. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

6. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 7 B) 3 C) 2 D) 5

7. $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\dots\bullet\sqrt{10}}{\sqrt{x}}$ kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

- A) 7 B) 2 C) 5 D) 3

8. bu yerda $[a] = asoniningbutunqismi$ $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -105 B) -124 C) -50 D) -62

9. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 8 B) 4 C) 6 D) 5

10. Agar $a=39-\sqrt{432}$ bo'lsa, $\sqrt{a}+\sqrt{3}$ ifodaning qiymatini toping.

- A) 6 B) 3 C) $6\sqrt{3}$ D) $6+\sqrt{3}$

11. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2}\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

- A) 8 B) 6 C) 9 D) 7

12. ikki sonning yig'indisi $\sqrt{6}ga$, ayirmasi $\sqrt{10}$ ga teng. ularning ko'paytmasi ikkidan qanchaga kam?

- A) 3 B) 2 C) 1 D) 4

13. Hisoblang: $\frac{\sqrt{5-3\sqrt{2},(6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2},(6)}}{\sqrt{2}}$

- A) $\sqrt{6}$ B) $2\sqrt{3}$ C) 2 D) $2\sqrt{2}$

14. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 12 B) $5-3\sqrt{3}$ C) 10 D) $6\sqrt{3}$

15. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) $\sqrt{2}+1$ B) $\sqrt{2}-1$ C) 1 D) 2

16. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$

- A) $2a^2$ B) 2 C) $2-2a^2$ D) $\sqrt{a^4+1}-\sqrt{a^4-1}$

17. $x=\sqrt{2}$ va $y=\sqrt{5}$ bo'lsa, $\sqrt{9x^2+12xy+4y^2} - \sqrt{9x^2-12xy+4y^2} = ?$

- A) $6\sqrt{2}$ B) $-4\sqrt{5}$ C) $-6\sqrt{2}$ D) $4\sqrt{5}$

18. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{5}$
 B) $\sqrt{2}+\sqrt{3}$
 C) $\sqrt{2}+\sqrt{10}$
 D) $\sqrt{2}+1$

19. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1-\frac{1}{n}+\frac{1}{n+1}$
 B) $1-\frac{1}{n}-\frac{1}{n+1}$
 C) $1+\frac{1}{n}+\frac{1}{n+1}$
 D) $1+\frac{1}{n}-\frac{1}{n+1}$

20. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $2\sqrt{14}$
 B) $-2(\sqrt{7}+2\sqrt{3})$
 C) $2(2\sqrt{3}-\sqrt{7})$
 D) $2\sqrt{7}$

21. Soddalashtiring: $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- A) $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 B) $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
 C) $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
 D) $\frac{\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$

22. $4+2\sqrt{2}$ somiga teskari sonni toping.

- A) $\frac{1}{4-2\sqrt{2}}$ B) $0,5-0,25\sqrt{2}$ C) $4-2\sqrt{2}$ D) $-4-2\sqrt{2}$

23. Hisoblang: $\frac{\sqrt{5-3\sqrt{2},(6)}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2},(6)}}{\sqrt{2}}$

- A) $2\sqrt{3}$ B) $2\sqrt{2}$ C) 2 D) $\sqrt{6}$

24. Hisoblang: $(5\sqrt{5} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 1 B) 25 C) 5 D) $\sqrt{4}$

25. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) -2 B) 2 C) $2\sqrt{3}$ D) $-2\sqrt{3}$

26. Hisodblang: $\sqrt{11} \bullet \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- A) 33 B) 11 C) 22 D) 44

27. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[a]{a} + \sqrt[b]{b}$ bo'lsa, a+b ni toping.

- A) 16 B) 18 C) 10 D) 20

28. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
 B) $(\sqrt[3]{4}+1)^2$
 C) $-(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{16}+1$

29. $a = \pi - e$, bo'lsa ifodani soddalashtiring.

$\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$

- A) 2 B) $2a^2$ C) $\sqrt{a^4+1}-\sqrt{a^4-1}$ D) $2-2a^2$

30. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) 3 C) 1 D) cheksiz ko'p

31. $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$ ni hisoblang.

- A) 1 B) $\sqrt{2}+1$ C) $\sqrt{2}-1$ D) 2

32. Hisoblang: $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -240 B) -60 C) -480 D) -120

33. Hisoblang: $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- A) $\sqrt[3]{4}$
 B) $-(\sqrt[3]{4}+1)^2$
 C) $(\sqrt[3]{4}+1)^2$
 D) $\sqrt[3]{16}+1$

34. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 8 C) 3 D) 5

35. $x = \sqrt{2}$ va $y = \sqrt{5}$ bo'lsa, $\sqrt{9x^2 + 12xy + 4y^2} - \sqrt{9x^2 - 12xy + 4y^2} = ?$

- A) $-4\sqrt{5}$ B) $4\sqrt{5}$ C) $-6\sqrt{2}$ D) $6\sqrt{2}$

36. $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$ ni soddalashtiring

- A) $1 + \frac{1}{n} - \frac{1}{n+1}$
 B) $1 + \frac{1}{n} + \frac{1}{n+1}$
 C) $1 - \frac{1}{n} + \frac{1}{n+1}$
 D) $1 - \frac{1}{n} - \frac{1}{n+1}$

37. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6} - \sqrt{5})^{-1}$

- A) 11 B) 1 C) $\sqrt{30}$ D) 0

38. $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

- A) 8 B) 7 C) 6 D) 9

39. Bunda $x=8$ va $y=2\sqrt{2}$ $\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \bullet \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}}+\sqrt[3]{y^2}} \bullet (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 5 B) 6 C) 4 D) 8

40. Hisoblang: $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- A) 5 B) 1 C) $\sqrt{4}$ D) 25

41. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 0,25 $\sqrt[3]{65}$ B) 1 C) $\sqrt[3]{2}$ D) 1,5

42. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) $\sqrt[3]{2}$ B) $\sqrt{2}$ C) 2 D) $\sqrt[6]{2}$

43. Agar $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$ bo'lsa, a+b ni toping.

- A) 18 B) 20 C) 16 D) 10

44. $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$

- A) 10 B) $5-3\sqrt{3}$ C) 12 D) $6\sqrt{3}$

45. Hisoblang: $\sqrt{\frac{13-6\sqrt{4,(6)}}{3+6\sqrt{0,(22)}}} - \sqrt{\frac{13+6\sqrt{4,(6)}}{3-6\sqrt{0,(22)}}}$

- A) $-2(\sqrt{7}+2\sqrt{3})$
 B) $2(2\sqrt{3}-\sqrt{7})$
 C) $2\sqrt{14}$
 D) $2\sqrt{7}$

46. Hisoblang: $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$

- A) 1,5 B) 1 C) 0,25 $\sqrt[3]{65}$ D) $\sqrt[3]{2}$

47. $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$ bo'lsa, x ni toping.

- A) 27 B) 3 C) 1 D) cheksiz ko'p

48. A= $\sqrt{2} - \sqrt[3]{2}$, B= $\sqrt[3]{2} + \sqrt[6]{2} + 1$ va C= $\sqrt{2} - 1$ bo'lsa, $\frac{AB}{C}$ ning qiyamatini toping.

- A) 2 O'quvchilarim mazza qilsin: 2-Variant

- B) $\sqrt{2}$

- C) $\sqrt[3]{2}$

- D) $\sqrt[6]{2}$

49. $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$

- A) $\frac{\sqrt{6}}{3}$ B) 2 C) $\sqrt{2}$ D) $\frac{\sqrt{2}}{2}$

50. Hisoblang: $(\frac{10}{\sqrt{6}-1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \bullet (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- A) -120 B) -60 C) -480 D) -240

51. Hisoblang: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$

- A) $2\sqrt{3}$ B) -2 C) 2 D) $-2\sqrt{3}$

52. $x = n + \sqrt{n^2 - 16}$; $y = n - \sqrt{n^2 - 16}$ va $y=2$ bo'lsa, x va y ning o'rta arifmetigini toping.

- A) 4 B) 3 C) 8 D) 5

53. bu yerda $[a] = asoniningbutunqismi [-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- A) -105 B) -50 C) -62 D) -124

54. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 1 B) $\sqrt{24}$ C) 2 D) 5

55. $4+2\sqrt{2}$ soniga teskari sonni toping.

- A) $0,5-0,25\sqrt{2}$ B) $4-2\sqrt{2}$ C) $\frac{1}{4-2\sqrt{2}}$ D) $-4-2\sqrt{2}$

56. $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$

- A) $\sqrt{2}+\sqrt{3}$
 B) $\sqrt{2}+\sqrt{5}$
 C) $\sqrt{2}+\sqrt{10}$
 D) $\sqrt{2}+1$

57. Agar $a=39 - \sqrt{432}$ bo'lsa, $\sqrt{a} + \sqrt{3}$ ifodaning qiyamatini toping.

- A) $6+\sqrt{3}$ B) 3 C) $6\sqrt{3}$ D) 6

58. Soddalashtiring: $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$

- A) 1 B) 1 C) 0 D) 3

59. $\frac{\sqrt{0,5}}{\sqrt{2,4}} \bullet (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 1 B) 5 C) $\sqrt{24}$ D) 2

60. $\sqrt{\sqrt{241+44\sqrt{30}}} - (\sqrt{6} - \sqrt{5})^{-1}$

- A) 1 B) 11 C) $\sqrt{30}$ D) 0