

# 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'lsa,  $\frac{AB}{C}$  ning qiymatini 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'lsa, x ni toping.

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

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

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

6. ikki sonning yig'indisi  $\sqrt{6}ga$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidand 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'lsa,  $\frac{AB}{C}$  ning qiymatini toping.

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

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

- 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 soddashtiring

- 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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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'lsa,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini toping.

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

16.  $x = \sqrt{2}$  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)  $-4\sqrt{5}$

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

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

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

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

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

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

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

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

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

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

24.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.

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

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

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

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

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 soddashtiring

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

- 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 ikkidand 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  $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  bo'lsa,  $a+b$  ni toping.  
 A) 10 B) 18 C) 20 D) 16
36. Hisodblang:  $\sqrt{11} \cdot \left( \frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$   
 A) 22 B) 44 C) 11 D) 33
37. Hisodblang:  $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$   
 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 hisodblang.  
 A)  $\sqrt{2} + 1$  B) 2 C) 1 D)  $\sqrt{2} - 1$
39.  $\frac{\sqrt{0.5}}{\sqrt{2.4}} \cdot \left( \sqrt{\frac{1.2-0.7}{1.2+0.7}} + \sqrt{\frac{2.4+1.4}{2.4-1.4}} \right) \cdot \frac{\sqrt{1.5+0.4}}{\sqrt{0.9+1.5}} = ?$   
 A) 1 B)  $\sqrt{24}$  C) 2 D) 5
40. Bunda  $x=8$  va  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$   
 A) 5 B) 6 C) 4 D) 8
41.  $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}}}\dots} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$   
 A) 6 B) 7 C) 8 D) 9
42. Hisodblang:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$   
 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. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x+4x}\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x}\sqrt{y}-3y\sqrt{x}}$   
 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.  $\frac{\sqrt{0.5}}{\sqrt{2.4}} \cdot \left( \sqrt{\frac{1.2-0.7}{1.2+0.7}} + \sqrt{\frac{2.4+1.4}{2.4-1.4}} \right) \cdot \frac{\sqrt{1.5+0.4}}{\sqrt{0.9+1.5}} = ?$   
 A) 2 B) 1 C)  $\sqrt{24}$  D) 5
46. Agar  $a=39 - \sqrt{432}$  bo'lsa,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$   
 A) -124 B) -62 C) -105 D) -50
49.  $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}}}\dots} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$   
 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. Hisodblang:  $\left( \frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}} \right) \cdot (\sqrt{96} + \sqrt{\left(\frac{1}{24}\right)^{-2}})$   
 A) -480 B) -120 C) -240 D) -60
52. Hisodblang:  $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{28}+\sqrt{21}+\sqrt{20}+\sqrt{15}} - \frac{\sqrt{3}+\sqrt{5}}{\sqrt{20}-\sqrt{15}+\sqrt{12}-3}$   
 A) -2 B)  $-2\sqrt{3}$  C) 2 D)  $2\sqrt{3}$
53. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x+4x}\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x}\sqrt{y}-3y\sqrt{x}}$   
 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)  $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
54. Hisodblang:  $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$   
 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 soddashtiring.  
 $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$   
 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  $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  bo'lsa,  $a+b$  ni toping.  
 A) 18 B) 10 C) 20 D) 16
59. Hisodblang:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$   
 A) 5 B)  $\sqrt{4}$  C) 1 D) 25
60. Bunda  $x=8$  va  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$   
 A) 6 B) 8 C) 4 D) 5

# O'quvchi 02 (7-A)

Variant: 705C1118 • Matematika • 7-A

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

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

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

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

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

- A) 5 B)  $\sqrt{24}$  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. Hisodblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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

- A) 5 B)  $\sqrt{24}$  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  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 6 B) 8 C) 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

24.  $A = \sqrt{2} - \sqrt[3]{2}$ ,  $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$  va  $C = \sqrt{2} - 1$  bo'lsa,  $\frac{4B}{C}$  ning qiymatini toping.

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

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

- 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun  $x$  quyidagilarning qaysi 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. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a+1})(\sqrt{a-1})}{(a-b)(\sqrt{a+1})^2} + 2$

- 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 ikkidana 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  $y=2\sqrt{2} \cdot \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

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

41. 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

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

- 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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- 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 soddashtiring

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

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

- 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:  $(5^5\sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

56.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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 soddashtiring.

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

- 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

- 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)  $2\sqrt{2}$
- 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
- 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)  $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- 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
- $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$   
A)  $\frac{\sqrt{2}}{2}$  B)  $\sqrt{2}$  C)  $\frac{\sqrt{6}}{3}$  D) 2
- 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
- $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$  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)  $1 - \frac{1}{n} + \frac{1}{n+1}$
- 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)  $2\sqrt{7}$
- 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
- Hisoblang:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$   
A) -60 B) -480 C) -240 D) -120
- 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)  $2\sqrt{14}$
- $x = \sqrt{2}$  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)  $4\sqrt{5}$
- Hisoblang:  $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$   
A) 1,5 B) 1 C)  $\sqrt[3]{2}$  D)  $0,25\sqrt[3]{65}$
- $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$  ni hisoblang.  
A)  $\sqrt{2}-1$  B)  $\sqrt{2}+1$  C) 2 D) 1
- 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) 5 B) 6 C) 4 D) 8

- $a = \pi - e$ , 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
- $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}}$   
A) 0 B) 1 C)  $\sqrt{30}$  D) 11
- $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\dots\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.  
A) 3 B) 5 C) 7 D) 2
- $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$  bo'lsa, x ni toping.  
A) cheksiz ko'p B) 1 C) 27 D) 3
- bu yerda  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$   
A) -124 B) -62 C) -105 D) -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)  $\sqrt{2} + \sqrt{3}$
- Hisoblang:  $\sqrt[3]{5+2\sqrt{13}} + \sqrt[3]{5-2\sqrt{13}}$   
A) 1 B)  $\sqrt[3]{2}$  C) 1,5 D)  $0,25\sqrt[3]{65}$
- $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$   
A) 7 B) 9 C) 8 D) 6
- $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$   
A)  $\frac{\sqrt{2}}{2}$  B) 2 C)  $\sqrt{2}$  D)  $\frac{\sqrt{6}}{3}$
- $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$   
A) 2 B)  $\sqrt{24}$  C) 5 D) 1
- 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)  $(\sqrt[3]{4} + 1)^2$
- $x = n + \sqrt{n^2 - 16}$ ;  $y = n - \sqrt{n^2 - 16}$  va  $y=2$  bo'lsa, x va y ning o'rtta arifmetigini toping.  
A) 3 B) 4 C) 8 D) 5
- 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
- Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
A) 44 B) 11 C) 22 D) 33
- 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)  $(\sqrt[3]{4} + 1)^2$
- $A = \sqrt{2} - \sqrt[3]{2}$ ,  $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$  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. Hisodblang:  $\sqrt{11} \cdot \left( \frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

- 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'rtta arifmetigini toping.

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

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

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

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

- A) 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

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

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

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

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

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

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

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

- 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 soddashtiring

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

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

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

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

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

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

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

5.  $a = \pi - e$ , bo'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)  $\sqrt{a^4+1} - \sqrt{a^4-1}$

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'lsa,  $\frac{AB}{C}$  ning qiymatini 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'lsa, x ni toping.

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

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

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

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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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:  $(5^5\sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

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

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

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

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

18. 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

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

- 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'lsa, x va y ning o'rta arifmetigini toping.

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

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

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

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

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

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

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

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

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

- 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{2}}$  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'lsa, 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.  $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}}=?$   
 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:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$   
 A) -480 B) -120 C) -60 D) -240
41. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$   
 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  $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$   
 A) 6 B) 8 C) 4 D) 5
47.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{10}}{\sqrt{x}}$  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  $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[3]{a} + \sqrt[3]{b}$  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. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$   
 A) 1 B) 0 C) 3 D) 1
57.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$   
 A) 5 B)  $\sqrt{24}$  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 soddallashtiring

- 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 soddallashtiring.

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

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

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

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

- 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- 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 ikkidand 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. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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

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

- A) 7 B) 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 soddallashtiring.

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

- 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. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

33. ikki sonning yig'indisi  $\sqrt{6}ga$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidand 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. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$

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

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

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

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

- A) 5 B)  $\sqrt{24}$  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. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$

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

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

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

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

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

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

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

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

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

- A) 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 soddashtiring

- 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  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

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

- 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

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

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

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

- A) 7 B) 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

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

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

- 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)  $\frac{4\sqrt{y-x}}{\sqrt{y}+\sqrt{x}}$   
 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 ikkidani qanchaga kam?

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

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

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

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  $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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)  $0.25\sqrt[3]{65}$  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 ikkidani qanchaga kam?

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

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

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

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

- 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 qiymatini toping.

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

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

- A)  $\sqrt{24}$  B) 1 C) 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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- 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 qiymatini 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- 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 qiymatini toping.

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

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

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

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

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

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

- A) 8 B) 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 ikkidana 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. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$

- 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'lsa ifodani soddashtiring.

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

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

6.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

- 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'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)  $6\sqrt{2}$

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

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

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'lsa, x ni toping.

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

13. 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

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

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

15. 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) 10 D) 16

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

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

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

- 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  $y=2\sqrt{2}\frac{x+y}{\sqrt{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

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

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

- 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'lsa, x ni toping.

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

26.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.

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

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

27. Hisoblang:  $\sqrt{11} \cdot (-\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- 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'lsa, x va y ning o'rta arifmetigini toping.

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

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

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

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

- A) 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 soddashtiring

- 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,  $\frac{4B}{C}$  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.  $\sqrt[3]{4\sqrt{2\sqrt{3\sqrt{4\sqrt{2}\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$

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

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

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

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

- 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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,  $\frac{4B}{C}$  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 ikkidana qanchaga kam?

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

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

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

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

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

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

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

53. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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  $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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  $[a]$  - asoniningbutunqismi  $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- 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 soddallashtiring

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

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

A)  $\sqrt{24}$  B) 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  $y=2\sqrt{2}$   $\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

A) 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. Soddallashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$

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

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

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

21.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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 soddallashtiring

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

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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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.  $\frac{\sqrt{0.5}}{\sqrt{2.4}} \cdot (\sqrt{\frac{1.2-0.7}{1.2+0.7}} + \sqrt{\frac{2.4+1.4}{2.4-1.4}}) \cdot \frac{\sqrt{1.5+0.4}}{\sqrt{0.9+1.5}} = ?$

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

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

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

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

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

37.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.

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

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

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

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

- A) 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. Soddashtiring:  $\frac{x\sqrt{y-3y\sqrt{x-4y\sqrt{y}}}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y-x\sqrt{y}}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$

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

- 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. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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

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

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

57.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.

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

- 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

60. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

# 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 ikkidana qanchaga kam?

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

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

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

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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[3]{a} + \sqrt[3]{b}$  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:  $\sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0,22}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0,22}}}$

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

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

- A) 5 B) 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.  $\frac{\sqrt{1} \cdot \sqrt{2} \cdot \sqrt{3} \cdot \dots \cdot \sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun  $x$  quyidagilarning qaysi biriga teng.

- A) 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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

- 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:  $(5^5 \sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{5}{2})^{-2}}$

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

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

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

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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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

- 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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[3]{a} + \sqrt[3]{b}$  bo'lsa,  $a+b$  ni toping.

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

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

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

33. ikki sonning yig'indisi  $\sqrt{6}ga$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidana 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,  $\frac{4B}{C}$  ning qiymatini 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  $y=2\sqrt{2} \cdot \frac{x+y}{\sqrt{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

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

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

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

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

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

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

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

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

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

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

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

- 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 qiymatini 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 ikkidana qanchaga kam?

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

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

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

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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 soddashtiring

- 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 ikkidana 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 soddashtiring.

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

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

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

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

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

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

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

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

- A) 5 B) 2 C)  $\sqrt{24}$  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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- 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. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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

- A) 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)  $0,25\sqrt[3]{65}$  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)  $0,25\sqrt[3]{65}$  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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

35. Agar  $a = 39 - \sqrt{432}$  bo'lsa,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini 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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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.  $\frac{\sqrt{1} \cdot \sqrt{2} \cdot \sqrt{3} \cdot \dots \cdot \sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun  $x$  quyidagilarning qaysi biriga teng.

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

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

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

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

- 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 soddashtiring

- 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 qiymatini 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 soddashtiring.

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

- 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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

- 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 qiymatini toping.

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

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

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

- 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

- $a = \pi - e$ , 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)  $2a^2$
- $x = \sqrt{2}$  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)  $6\sqrt{2}$
- 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)  $2\sqrt{14}$
- 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)  $-2\sqrt{3}$
- $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$   
 A) 1 B) 11 C)  $\sqrt{30}$  D) 0
- 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
- $\sqrt{22 - 30\sqrt{4 - 2\sqrt{3}}} + 5 + 3\sqrt{3}$   
 A)  $5 - 3\sqrt{3}$  B) 10 C) 12 D)  $6\sqrt{3}$
- $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.  
 A) 5 B) 2 C) 3 D) 7
- Hisoblang:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$   
 A) -120 B) -60 C) -240 D) -480
- $\sqrt{\sqrt{241} + 44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}$   
 A) 11 B)  $\sqrt{30}$  C) 1 D) 0
- $x = \sqrt{2}$  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)  $4\sqrt{5}$
- $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$   
 A)  $\sqrt{2} + \sqrt{3}$   
 B)  $\sqrt{2} + 1$   
 C)  $\sqrt{2} + \sqrt{5}$   
 D)  $\sqrt{2} + \sqrt{10}$
- Hisodblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
 A) 22 B) 11 C) 33 D) 44
- 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
- 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
- $\frac{\sqrt{0.5}}{\sqrt{2.4}} \cdot (\sqrt{\frac{1.2-0.7}{1.2+0.7}} + \sqrt{\frac{2.4+1.4}{2.4-1.4}}) \cdot \frac{\sqrt{1.5+0.4}}{\sqrt{0.9+1.5}} = ?$   
 A) 2 B)  $\sqrt{24}$  C) 5 D) 1
- 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
- Hisodblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
 A) 11 B) 22 C) 44 D) 33
- 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

- 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) 4 B) 8 C) 5 D) 6
- $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.  
 A) 5 B) 7 C) 2 D) 3
- 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)  $2\sqrt{3}$
- 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)  $\sqrt[3]{2}$
- 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)  $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- $a = \pi - e$ , 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)  $2 - 2a^2$
- $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$   
 A) 2 B)  $\frac{\sqrt{6}}{3}$  C)  $\frac{\sqrt{2}}{2}$  D)  $\sqrt{2}$
- bu yerda  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$   
 A) -105 B) -62 C) -50 D) -124
- $\frac{\sqrt{0.5}}{\sqrt{2.4}} \cdot (\sqrt{\frac{1.2-0.7}{1.2+0.7}} + \sqrt{\frac{2.4+1.4}{2.4-1.4}}) \cdot \frac{\sqrt{1.5+0.4}}{\sqrt{0.9+1.5}} = ?$   
 A) 1 B)  $\sqrt{24}$  C) 5 D) 2
- Agar  $a=39 - \sqrt{432}$  bo'lsa,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini toping.  
 A)  $6 + \sqrt{3}$  B) 6 C) 3 D)  $6\sqrt{3}$
- $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$  ni hisoblang.  
 A) 2 B)  $\sqrt{2} + 1$  C)  $\sqrt{2} - 1$  D) 1
- 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
- $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$   
 A)  $\frac{\sqrt{2}}{2}$  B)  $\frac{\sqrt{6}}{3}$  C)  $\sqrt{2}$  D) 2
- $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$  bo'lsa, x ni toping.  
 A) 1 B) 3 C) 27 D) cheksiz ko'p
- $\sqrt{8 + 2\sqrt{10 + 2\sqrt{5}}} + \sqrt{8 - 2\sqrt{10 + 2\sqrt{5}}} = ?$   
 A)  $\sqrt{2} + \sqrt{5}$   
 B)  $\sqrt{2} + \sqrt{3}$   
 C)  $\sqrt{2} + 1$   
 D)  $\sqrt{2} + \sqrt{10}$
- 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)  $\sqrt[3]{4}$
- $x = n + \sqrt{n^2 - 16}$ ;  $y = n - \sqrt{n^2 - 16}$  va  $y=2$  bo'lsa, x va y ning o'rta arifmetigini toping.  
 A) 8 B) 3 C) 5 D) 4

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

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

38. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x-4y}\sqrt{y}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y-x}\sqrt{y}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$

- 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  $y=2\sqrt{2} \cdot \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

- A) 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.  $4+2\sqrt{2}$  soniga teskari sonni toping.

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

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:  $(5^{\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

- 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 ikkidana qanchaga kam?

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

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

- 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 soddashtiring

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

- 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 soddashtiring

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

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

- 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 soddashtiring

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

7.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.

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

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

- 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  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

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

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

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

17. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

- A) 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:  $(5^5\sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

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

- A) 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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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:  $(5^5\sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

- 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 ikkidani 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. Hisodblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

- A)  $\sqrt{24}$  B) 1 C) 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.  $\sqrt[3]{4\sqrt{2\sqrt[3]{4\sqrt{2}\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}} = ?$

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

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

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

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

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

43. Hisodblang:  $\frac{\sqrt{5-3\sqrt{2,6}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2,6}}}{\sqrt{2}}$

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

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

- 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  $y=2\sqrt{2} \cdot \frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}}+y^{\frac{1}{3}}) = ?$

- A) 6 B) 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'lsa ifodani soddashtiring.

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

- 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 qiymatini 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 soddashtiring

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

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

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

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

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

- 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 ikkidani qanchaga kam?

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

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

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

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

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

# O'quvchi 13 (7-A)

Variant: 71A41C63 • Matematika • 7-A

- $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$   
A)  $5-3\sqrt{3}$  B) 10 C) 12 D)  $6\sqrt{3}$
- ikki sonning yig'indisi  $\sqrt{6}ga$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidandan qanchaga kam?  
A) 1 B) 3 C) 2 D) 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)  $6\sqrt{2}$  C)  $-4\sqrt{5}$  D)  $-6\sqrt{2}$
- ikki sonning yig'indisi  $\sqrt{6}ga$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidandan qanchaga kam?  
A) 3 B) 1 C) 4 D) 2
- $A=\sqrt{2}-\sqrt[3]{2}$ ,  $B=\sqrt[3]{2}+\sqrt[6]{2}+1$  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)  $\sqrt[3]{2}$
- 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
- $\sqrt{22-30\sqrt{4-2\sqrt{3}}}+5+3\sqrt{3}$   
A)  $5-3\sqrt{3}$  B) 10 C) 12 D)  $6\sqrt{3}$
- $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}}=?$   
A)  $\sqrt{24}$  B) 5 C) 2 D) 1
- $\sqrt{8+2\sqrt{10+2\sqrt{5}}}+\sqrt{8-2\sqrt{10+2\sqrt{5}}}=?$   
A)  $\sqrt{2}+\sqrt{10}$   
B)  $\sqrt{2}+\sqrt{3}$   
C)  $\sqrt{2}+\sqrt{5}$   
D)  $\sqrt{2}+1$
- 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)  $\frac{4\sqrt{y}-\sqrt{x}}{\sqrt{y}+\sqrt{x}}$
- Hisoblang:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$   
A) -240 B) -480 C) -60 D) -120
- 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)  $2\sqrt{14}$
- Hisoblang:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$   
A) 25 B) 5 C)  $\sqrt{4}$  D) 1
- Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+3} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
A) 22 B) 33 C) 44 D) 11
- $x^2+y^2+z^2=6x+8y+10z-50$  bo'lsa, x ni toping.  
A) 3 B) 1 C) cheksiz ko'p D) 27
- 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
- $a=\pi-e$ , 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
- $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$  ni hisoblang.  
A) 1 B)  $\sqrt{2}-1$  C) 2 D)  $\sqrt{2}+1$
- Hisoblang:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$   
A) -120 B) -240 C) -60 D) -480
- $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$  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)  $1-\frac{1}{n}+\frac{1}{n+1}$
- $\sqrt{8+2\sqrt{10+2\sqrt{5}}}+\sqrt{8-2\sqrt{10+2\sqrt{5}}}=?$   
A)  $\sqrt{2}+\sqrt{5}$   
B)  $\sqrt{2}+\sqrt{10}$   
C)  $\sqrt{2}+1$   
D)  $\sqrt{2}+\sqrt{3}$
- Hisoblang:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$   
A) 5 B)  $\sqrt{4}$  C) 1 D) 25
- $x^2+y^2+z^2=6x+8y+10z-50$  bo'lsa, x ni toping.  
A) 3 B) 27 C) cheksiz ko'p D) 1
- $a=\pi-e$ , 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)  $2a^2$
- $\sqrt{\sqrt{241+44\sqrt{30}}-(\sqrt{6}-\sqrt{5})^{-1}}$   
A) 0 B) 1 C) 11 D)  $\sqrt{30}$
- $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\dots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\dots+\sqrt{10-\sqrt{99}}}$  ni hisoblang.  
A) 2 B)  $\sqrt{2}+1$  C) 1 D)  $\sqrt{2}-1$
- Hisoblang:  $\sqrt[3]{5+2\sqrt{13}}+\sqrt[3]{5-2\sqrt{13}}$   
A)  $\sqrt[3]{2}$  B) 1,5 C) 1 D)  $0,25\sqrt[3]{65}$
- Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+3} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
A) 11 B) 44 C) 33 D) 22
- 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)  $2\sqrt{2}$
- Bunda  $x=8$  va  $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$   
 $(x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$   
A) 4 B) 8 C) 6 D) 5
- $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2}+\sqrt{3}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2}-\sqrt{3}} =$   
A) 2 B)  $\frac{\sqrt{6}}{3}$  C)  $\frac{\sqrt{2}}{2}$  D)  $\sqrt{2}$
- Bunda  $x=8$  va  $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}}-y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}}$   
 $(x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$   
A) 6 B) 5 C) 4 D) 8
- 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
- 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.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

- A) 5 B)  $\sqrt{24}$  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.  $A=\sqrt{2}-\sqrt[3]{2}$ ,  $B=\sqrt[3]{2}+\sqrt[6]{2}+1$  va  $C=\sqrt{2}-1$  bo'lsa,  $\frac{AB}{C}$  ning qiymatini toping.

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

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 qiymatini toping.

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

56.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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:  $\frac{3}{2^{\frac{3}{2}}-2^{\frac{3}{4}}} - \frac{3}{2^{\frac{3}{2}}-2^{\frac{3}{4}}} + \sqrt[3]{4}$   
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 ikkidana 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.  $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}\dots}}} + \sqrt{30 + \sqrt{30 + \sqrt{30 + \dots}}} = ?$   
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. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$   
A) 0 B) -1 C) 1 D) 3
14. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$   
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 soddashtiring.  
 $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$   
A)  $2a^2$  B)  $2 - 2a^2$  C)  $\sqrt{a^4 + 1} - \sqrt{a^4 - 1}$  D) 2
18. Bunda  $x=8$  va  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$   
A) 8 B) 6 C) 5 D) 4
19. 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) 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 ikkidana qanchaga kam?  
A) 3 B) 2 C) 1 D) 4
24. Hisoblang:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$   
A) -120 B) -240 C) -480 D) -60
25.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.  
 $\sqrt{a^2(a^2 - a + 1) + a^2(a + 1) + 1} - \sqrt{a^2(a^2 + a - 1) - a^2(a + 1) + 1}$   
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 soddashtiring  
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. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$   
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.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$   
A)  $\sqrt{24}$  B) 5 C) 2 D) 1
32.  $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$  ni soddashtiring  
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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

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

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

- 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.  $A = \sqrt{2} - \sqrt[3]{2}$ ,  $B = \sqrt[3]{2} + \sqrt[6]{2} + 1$  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 O'quvchilarim mazza qilsin: 2-Variant

40. Agar  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[3]{a} + \sqrt[4]{b}$  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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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. Hisoblang:  $\sqrt{11} \cdot \left(\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1\right)$

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

46.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun  $x$  quyidagilarning qaysi biriga teng.

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

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

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

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

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

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

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

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

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

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

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

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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

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

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

- 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  $y=2\sqrt{2}\frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}}\cdot(x^{\frac{1}{3}}-y^{\frac{1}{3}})\cdot\frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}\cdot(x^{\frac{1}{3}}+y^{\frac{1}{3}})=?$

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

$$4. \text{Hisoblang: } \frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$$

- 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

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

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

$$8. \text{Hisodblang: } \sqrt{11}\cdot\left(\frac{1}{1+\sqrt{2}}+\frac{1}{\sqrt{2}+\sqrt{3}}+\dots+\frac{1}{\sqrt{98}+\sqrt{99}}+1\right)$$

- A) 11 B) 44 C) 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)  $-4-2\sqrt{2}$

$$13. \sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}\dots}}} + \sqrt{30+\sqrt{30+\sqrt{30+\dots}}}=?$$

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

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

- 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

$$16. \text{Hisoblang: } \sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0(22)}}}$$

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

$$17. \text{Hisoblang: } \frac{3}{2^{\frac{3}{2}+2^{\frac{3}{4}}}} - \frac{3}{2^{\frac{3}{2}-2^{\frac{3}{4}}}} + \sqrt[3]{4}$$

- 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)  $\sqrt{2}+\sqrt{10}$

$$20. \text{Hisoblang: } \sqrt{\frac{13-6\sqrt{4(6)}}{3+6\sqrt{0(22)}}} - \sqrt{\frac{13+6\sqrt{4(6)}}{3-6\sqrt{0(22)}}}$$

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

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

- 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

$$23. \text{Soddalashtiring: } \frac{x\sqrt{y}-3y\sqrt{x-4y}\sqrt{y}}{x\sqrt{x+4x}\sqrt{y+3y}\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x}\sqrt{y-3y}\sqrt{x}}$$

- 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)  $\frac{\sqrt{y}-3\sqrt{x}}{\sqrt{y}+\sqrt{x}}$

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

- 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

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

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

27. 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) 5 C) 8 D) 4

$$28. \frac{\sqrt{0,5}}{\sqrt{2,4}}\cdot\left(\sqrt{\frac{1,2-0,7}{1,2+0,7}}+\sqrt{\frac{2,4+1,4}{2,4-1,4}}\right)\cdot\frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}}=?$$

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

$$29. \text{Hisoblang: } \frac{3}{2^{\frac{3}{2}+2^{\frac{3}{4}}}} - \frac{3}{2^{\frac{3}{2}-2^{\frac{3}{4}}}} + \sqrt[3]{4}$$

- 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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 qiymatini 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

38. ikki sonning yig'indisi  $\sqrt{6}a$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidana 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  $\sqrt{6}a$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidana 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

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

- A) 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 qiymatini toping.

- A)  $\sqrt{2}$   
B) 2 O'quvchilarim mazza qilsin: 2-Variant  
C)  $\sqrt[3]{2}$   
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.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$

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

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

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

- 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 ikkidana 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. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
 A) 44 B) 11 C) 22 D) 33
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.  $\frac{\sqrt{1} \cdot \sqrt{2} \cdot \sqrt{3} \cdot \dots \cdot \sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun  $x$  quyidagilarning qaysi biriga teng.  
 A) 2 B) 5 C) 3 D) 7
18.  $4+2\sqrt{2}$  soniga teskari sonni toping.  
 A)  $4-2\sqrt{2}$  B)  $-4-2\sqrt{2}$  C)  $\frac{1}{4-2\sqrt{2}}$  D)  $0,5-0,25\sqrt{2}$
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:  $(5^5\sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$   
 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  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2} - \sqrt[3]{xy} + \sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2} + \sqrt[3]{xy} + \sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$   
 A) 6 B) 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. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$   
 A) 22 B) 44 C) 11 D) 33
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 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. 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
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:  $(5^5 \sqrt{5} \cdot \sqrt{5^{5-10} \sqrt{5}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$   
 A) 25 B) 1 C) 5 D)  $\sqrt{4}$
36.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}\right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$   
 A)  $\sqrt{24}$  B) 2 C) 5 D) 1
37. Hisoblang:  $\left(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}\right) \cdot (\sqrt{96} + \sqrt{\left(\frac{1}{24}\right)^{-2}})$   
 A) -60 B) -240 C) -480 D) -120
38. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2} + 2$   
 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  $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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 qiymatini 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  $y=2\sqrt{2} \cdot \frac{x+y}{\sqrt[3]{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}}$  bo'lsa,  $(x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$   
 A) 5 B) 4 C) 8 D) 6
47. Soddashtiring:  $\frac{x\sqrt{y-3y\sqrt{x-4y\sqrt{y}}}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y-x\sqrt{y}}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$   
 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.  
 A) 3 B) 7 C) 5 D) 2
49. Soddashtiring:  $\frac{x\sqrt{y-3y\sqrt{x-4y\sqrt{y}}}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y-x\sqrt{y}}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$   
 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.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot \left(\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}\right) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$   
 A) 2 B) 5 C) 1 D)  $\sqrt{24}$
51. 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) 10 D) 16
52.  $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$  ni soddashtiring  
 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:  $\left(\frac{10}{\sqrt{6+1}} + \frac{2}{\sqrt{6-2}} - \frac{6}{3-\sqrt{6}}\right) \cdot (\sqrt{96} + \sqrt{\left(\frac{1}{24}\right)^{-2}})$   
 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,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini toping.  
 A) 3 B)  $6+\sqrt{3}$  C)  $6\sqrt{3}$  D) 6
56.  $a = \pi - e$ , bo'lsa ifodani soddashtiring.  
 $\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$   
 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 soddashtiring.  
 $\sqrt{a^2(a^2-a+1)+a^2(a+1)+1} - \sqrt{a^2(a^2+a-1)-a^2(a+1)+1}$   
 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:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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

- A) 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

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

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

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

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

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

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

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

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:  $(5^5\sqrt{5} \cdot \sqrt{5^{5-10\sqrt{5}}})^{\left(\frac{\sqrt{5}}{2}\right)^{-2}}$

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

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

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

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:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$
- 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. Soddashtiring:  $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$
- A) 1 B) 0 C) 3 D) 1
42. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$
- 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. Soddashtiring:  $\frac{(a+2\sqrt{a}+1)(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a}+1)^2} + 2$
- 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 qiymatini toping.
- A) 6 B) 3 C)  $6 + \sqrt{3}$  D)  $6\sqrt{3}$
47.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
- A) 2 B) 1 C)  $\sqrt{24}$  D) 5
48.  $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$  ni soddashtiring
- 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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[4]{a} + \sqrt[4]{b}$  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  $\sqrt{6}a$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidana 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.  $\frac{\sqrt{0,5}}{\sqrt{2,4}} \cdot (\sqrt{\frac{1,2-0,7}{1,2+0,7}} + \sqrt{\frac{2,4+1,4}{2,4-1,4}}) \cdot \frac{\sqrt{1,5+0,4}}{\sqrt{0,9+1,5}} = ?$
- A)  $\sqrt{24}$  B) 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.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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  $y=2\sqrt{2} \frac{x+y}{\sqrt{x^2-\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2+\sqrt[3]{xy}+\sqrt[3]{y^2}}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$
- A) 5 B) 4 C) 8 D) 6

# O'quvchi 18 (7-A)

Variant: 3AE07CE9 • Matematika • 7-A

- $\sqrt{\sqrt{241+44\sqrt{30}} - (\sqrt{6} - \sqrt{5})^{-1}}$   
A) 1 B) 11 C) 0 D)  $\sqrt{30}$
- Hisoblang:  $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$   
A) 25 B) 1 C)  $\sqrt{4}$  D) 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)  $1 + \frac{1}{n} - \frac{1}{n+1}$
- $\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} =$   
A)  $\sqrt{2}$  B) 2 C)  $\frac{\sqrt{2}}{2}$  D)  $\frac{\sqrt{6}}{3}$
- $\frac{\sqrt{1}\bullet\sqrt{2}\bullet\sqrt{3}\bullet\ldots\bullet\sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.  
A) 3 B) 7 C) 2 D) 5
- Agar  $\sqrt{4\sqrt{2}+2\sqrt{6}} = \sqrt[3]{a} + \sqrt[3]{b}$  bo'lsa, a+b ni toping.  
A) 16 B) 18 C) 20 D) 10
- $\sqrt{8+2\sqrt{10+2\sqrt{5}}} + \sqrt{8-2\sqrt{10+2\sqrt{5}}} = ?$   
A)  $\sqrt{2}+1$   
B)  $\sqrt{2}+\sqrt{10}$   
C)  $\sqrt{2}+\sqrt{5}$   
D)  $\sqrt{2}+\sqrt{3}$
- $\sqrt{22-30\sqrt{4-2\sqrt{3}}} + 5 + 3\sqrt{3}$   
A) 10 B) 12 C)  $5-3\sqrt{3}$  D)  $6\sqrt{3}$
- 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
- Agar a=39  $-\sqrt{432}$  bo'lsa,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini toping.  
A) 3 B) 6 C)  $6\sqrt{3}$  D)  $6+\sqrt{3}$
- 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
- Hisoblang:  $(5^{5\sqrt{5}} \bullet \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$   
A) 1 B)  $\sqrt{4}$  C) 5 D) 25
- 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)  $(\sqrt[3]{4}+1)^2$
- 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)  $\sqrt[6]{2}$
- $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$  bo'lsa, x ni toping.  
A) cheksiz ko'p B) 1 C) 3 D) 27
- 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
- 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

- bu yerda [a] - asoniningbutunqismi  $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \ldots + [-\sqrt{40}]$   
A) -50 B) -62 C) -105 D) -124
- Agar a=39  $-\sqrt{432}$  bo'lsa,  $\sqrt{a} + \sqrt{3}$  ifodaning qiymatini toping.  
A) 3 B)  $6+\sqrt{3}$  C) 6 D)  $6\sqrt{3}$
- $\frac{\sqrt{10+\sqrt{1}}+\sqrt{10+\sqrt{2}}+\ldots+\sqrt{10+\sqrt{99}}}{\sqrt{10-\sqrt{1}}+\sqrt{10-\sqrt{2}}+\ldots+\sqrt{10-\sqrt{99}}}$  ni hisoblang.  
A) 1 B) 2 C)  $\sqrt{2}+1$  D)  $\sqrt{2}-1$
- 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) 2 B)  $2-2a^2$  C)  $2a^2$  D)  $\sqrt{a^4+1} - \sqrt{a^4-1}$
- $\sqrt[3]{4\sqrt{2\sqrt{4\sqrt{2}}\ldots}} + \sqrt{30+\sqrt{30+\sqrt{30+\ldots}}} = ?$   
A) 6 B) 9 C) 8 D) 7
- 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
- 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)  $\sqrt[3]{2}$
- 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
- $x^2 + y^2 + z^2 = 6x + 8y + 10z - 50$  bo'lsa, x ni toping.  
A) 27 B) 3 C) cheksiz ko'p D) 1
- 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)  $\sqrt{6}$
- 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)  $2\sqrt{2}$
- 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)  $4\sqrt{5}$
- 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)  $\frac{3\sqrt{y}+\sqrt{x}}{\sqrt{y}-\sqrt{x}}$
- $\sqrt{\frac{n^4+2n^3+2n^2+2n+1}{n^2(n+1)^2}}$  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)  $1 + \frac{1}{n} - \frac{1}{n+1}$
- 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)  $2a^2$
- 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. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x+4x\sqrt{y}+3y\sqrt{x}}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x+2x\sqrt{y}-3y\sqrt{x}}}$

- 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:  $\sqrt{11} \cdot \left( \frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

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

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

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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

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

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

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

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

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

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

- 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  $\sqrt{6}a$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidana qanchaga kam?

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

55. 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

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

- 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:  $\sqrt{11} \cdot \left( \frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

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

60.  $\frac{\sqrt{1}\cdot\sqrt{2}\cdot\sqrt{3}\cdot\sqrt{4}\cdot\sqrt{5}\cdot\sqrt{6}\cdot\sqrt{7}\cdot\sqrt{8}\cdot\sqrt{9}\cdot\sqrt{10}}{\sqrt{x}}$  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.  $\frac{\sqrt{1} \cdot \sqrt{2} \cdot \sqrt{3} \cdot \dots \cdot \sqrt{10}}{\sqrt{x}}$  kasr ratsional son bo'lishi uchun x quyidagilarning qaysi biriga teng.

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

4. Hisoblang:  $\sqrt{11} \cdot (\frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1)$

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

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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

- 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'rtta arifmetigini toping.

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

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

- 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:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

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

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

- 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  $\sqrt{4\sqrt{2} + 2\sqrt{6}} = \sqrt[3]{a} + \sqrt[3]{b}$  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:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^3} + 2$

- 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  $y=2\sqrt{2} \frac{x+y}{\sqrt[3]{x^2}-\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} - y^{\frac{1}{3}}) \cdot \frac{x-y}{\sqrt[3]{x^2}+\sqrt[3]{xy}+\sqrt[3]{y^2}} \cdot (x^{\frac{1}{3}} + y^{\frac{1}{3}}) = ?$

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

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

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

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

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

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

- 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'rtta 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 ikkidani 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. Soddashtiring:  $\frac{(a+2\sqrt{a+1})(\sqrt{a}+\sqrt{b})(\sqrt{a}-\sqrt{b})}{(a-b)(\sqrt{a+1})^2}+2$

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

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

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

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

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

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

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

- 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 soddashtiring

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

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

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

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

- 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 soddashtiring.

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

- 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. Hisoblang:  $\sqrt{11}\cdot(\frac{1}{1+\sqrt{2}}+\frac{1}{\sqrt{2}+\sqrt{3}}+\dots+\frac{1}{\sqrt{98}+\sqrt{99}}+1)$

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



# O'quvchi 20 (7-A)

Variant: 9381F3DE • Matematika • 7-A

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

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

2. ikki sonning yig'indisi  $\sqrt{6}ga$ , ayirmasi  $\sqrt{10}$  ga teng. ularning ko'paytmasi ikkidana 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. Hisodblang:  $\sqrt{11} \cdot \left( \frac{1}{1+\sqrt{2}} + \frac{1}{\sqrt{2}+\sqrt{3}} + \dots + \frac{1}{\sqrt{98}+\sqrt{99}} + 1 \right)$

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

5. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

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

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

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

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

8. bu yerda  $[a] - \text{asonining butun qismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

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

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

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

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

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

13. Hisodblang:  $\frac{\sqrt{5-3\sqrt{2(6)}}}{\sqrt{2}} + \frac{\sqrt{5+3\sqrt{2(6)}}}{\sqrt{2}}$

- 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 hisodblang.

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

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

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

- 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 soddashtiring

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

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

21. Soddashtiring:  $\frac{x\sqrt{y}-3y\sqrt{x}-4y\sqrt{y}}{x\sqrt{x}+4x\sqrt{y}+3y\sqrt{x}} : \frac{y\sqrt{y}-x\sqrt{y}}{x\sqrt{x}+2x\sqrt{y}-3y\sqrt{x}}$

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

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

24. Hisodblang:  $(5^{5\sqrt{5}} \cdot \sqrt{5^{5-10\sqrt{5}}})^{(\frac{\sqrt{5}}{2})^{-2}}$

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

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

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

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

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

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

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

28. Hisodblang:  $\frac{3}{2\sqrt[3]{2}+2\sqrt[3]{4}} - \frac{3}{2\sqrt[3]{2}-2\sqrt[3]{4}} + \sqrt[3]{4}$

- 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 soddashtiring.

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

- 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 hisodblang.

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

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

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

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

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

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

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

- 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,  $\frac{4B}{C}$  ning qiymatini 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,  $\frac{4B}{C}$  ning qiymatini 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:  $(\frac{10}{\sqrt{6}+1} + \frac{2}{\sqrt{6}-2} - \frac{6}{3-\sqrt{6}}) \cdot (\sqrt{96} + \sqrt{(\frac{1}{24})^{-2}})$

- 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  $[a] - \text{asoniningbutunqismi}$   $[-\sqrt{20}] + [-\sqrt{21}] + [-\sqrt{22}] + \dots + [-\sqrt{40}]$

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

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

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

- 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