MATEMATIKA

1. Agar $\overline{abc}, \overline{bca}, \overline{cab}$ uch xonali natural sonlar yig'indisi 777 ga teng bo'lsa, a+b+c nitoping.
A) 7 B) 6 C) 8 D) 2
2. Agar $\overline{abc}, \overline{bca}, \overline{cab}$ uch xonali natural sonlar yig'indisi 666 ga teng bo'lsa, a+b+c nitoping.
A) 7 **B)** 6 C) 8 D) 2
3. Agar $\overline{abc}, \overline{bca}, \overline{cab}$ uch xonali natural sonlar yig'indisi 999 ga teng bo'lsa, a+b+c nitoping.
A) 9 B) 6 C) 7 D) 8
4. Agar $\overline{abc}, \overline{bca}, \overline{cab}$ uch xonali natural sonlar yig'indisi 888 ga teng bo'lsa, a+b+c nitoping.
A) 8 B) 6 C) 9 D) 2
5. Agar $\overline{abc}, \overline{bca}, \overline{cab}$ uch xonali natural sonlar yig'indisi 111 ga teng bo'lsa, a+b+c yig'indining eng katta qiymatini toping.
A) 9 B) 2 C) 1 D) 7
6. Agar $\overline{abc}, \overline{bca}, \overline{cab}$ uch xonali natural sonlar yig'indisi 111 ga teng bo'lsa, a+b+c ning eng kichik qiymatini toping.
A) 5 B) 6 C) 8 D) 2
7. $4,8 = x + \frac{y}{5}$ tenglikda x va y sonlar 5 dan kichik natural sonlar bo'lsa, y ning qiymatini toping.
A) 4 B) 1 C) 3 D) 2
8. $3,2 = x + \frac{y}{5}$ tenglikda x va y sonlar 5 dan kichik natural sonlar bo'lsa, y ning qiymatini toping.
A) 1 B) 4 C) 3 D) 2
9. $1,4 = x + \frac{y}{5}$ tenglikda x va y sonlar 5 dan kichik natural sonlar bo'lsa, y ning qiymatini toping.
A) 2 B) 4 C) 3 D) 1
10. $2,6 = x + \frac{y}{5}$ tenglikda x va y sonlar 5 dan kichik natural sonlar bo'lsa, y ning qiymatini toping.
A) 3 B) 4 C) 2 D) 1
11. $2 < a < 6 va 2 < b < 10$ bo'lsa, a va b butun sonlar uchun $\frac{1+\frac{a}{b}}{1+\frac{b}{a}}$ kasrning eng katta qiymatini toping.
A) 1,(6) B) 2,(3) C) 7 D) 15
12. $3 < a < 7$ *va* $3 < b < 10$ bo'lsa, a va b butun sonlar uchun $\frac{1+\frac{a}{b}}{1+\frac{b}{a}}$ kasrning eng katta qiymatini toping.
A) 1,5 B) 2,1 C) 6 D) 3
13. $4 < a < 9$ *va* $1 < b < 11$ bo'lsa, a va b butun sonlar uchun $\frac{1+\frac{a}{b}}{1+\frac{b}{a}}$ kasrning eng katta qiymatini toping.
A) 4 B) 4,5 C) 5 D) 3
14. Hisoblang: $\left(1\frac{1}{7}\right)\cdot\left(1\frac{1}{8}\right)\cdot\left(1\frac{1}{9}\right)\cdot\ldots\cdot\left(1\frac{1}{62}\right)$.
A) 9 B) 11/7 C) 7 D) 10/7
15. Hisoblang: $\left(1\frac{1}{7}\right)\cdot\left(1\frac{1}{8}\right)\cdot\left(1\frac{1}{9}\right)\cdot\ldots\cdot\left(1\frac{1}{76}\right)$.
A) 11 B) 11/7 C) 7 D) 76/7.
16. Hisoblang: $\left(1\frac{1}{7}\right)\cdot\left(1\frac{1}{8}\right)\cdot\left(1\frac{1}{9}\right)\cdot\ldots\cdot\left(1\frac{1}{69}\right)$.
A) 10 B) 10/7 C) 7 D) 69/7
17. Besh xonali Hisoblang: $\overline{x734y}$ sonini 55 ga bo'lganda natural son hosil bo'ladi. X ning barcha natural qiymatlari yig'indisini toping.
A) 11 B) 9 C) 3 D) 14
18. Besh xonali Hisoblang: $\overline{x853y}$ sonini 55 ga bo'lganda natural son hosil bo'ladi. X ning barcha natural qiymatlari yig'indisini toping.
A) 7 B) 11 C) 3 D) 6
19. Besh xonali Hisoblang: $\overline{x249y}$ sonini 55 ga bo'lganda natural son hosil bo'ladi. X ning barcha natural qiymatlari yig'indisini toping.
A) 9 B) 11 C) 3 D) 14
20. Besh xonali Hisoblang: $\overline{x526y}$ sonini 55 ga bo'lganda natural son hosil bo'ladi. X ning barcha natural qiymatlari yig'indisini toping.
A) 13 B) 9 C) 11 D) 14
21. Hisoblang: $\frac{1}{2}+\frac{2}{3}+\frac{3}{2}+\ldots+\frac{15}{2}+\frac{16}{3}$.
A) 56 B) 24 C) 65 D) 72
22. Hisoblang: $\frac{1}{8}+\frac{2}{9}+\frac{3}{8}+\ldots+\frac{15}{8}+\frac{16}{9}$.
A) 16 B) 14 C) 17 D) 18
23. Hisoblang: $\frac{1}{16}+\frac{2}{18}+\frac{3}{16}+\ldots+\frac{15}{16}+\frac{16}{18}$.
A) 8 B) 7 C) 9 D) 10
24. Hisoblang: $\frac{1}{4}+\frac{2}{6}+\frac{3}{4}+\ldots+\frac{15}{4}+\frac{16}{6}$.
A) 28 B) 24 C) 35 D) 30
25. $\left(x^2+x\right)+\left(x^2+2x\right)+\ldots+\left(x^2+19x\right)=1425$ tenglamani qanoatlantiruvchi x natural sonni toping.
A) 5 B) 10 C) 6 D) 8
26. $\left(x^2+x\right)+\left(x^2+2x\right)+\ldots+\left(x^2+17x\right)=1904$ tenglamani qanoatlantiruvchi x natural sonni toping.
A) 7 B) 10 C) 6 D) 8
27. $\left(x^2+x\right)+\left(x^2+2x\right)+\ldots+\left(x^2+19x\right)=1260$ tenglamani qanoatlantiruvchi x natural sonni toping.
A) 4 B) 5 C) 6 D) 8
28. $\left(x^2+x\right)+\left(x^2+2x\right)+\ldots+\left(x^2+19x\right)=1377$ tenglamani qanoatlantiruvchi x natural sonni toping.
A) 3 B) 4 C) 5 D) 6
29. Soddalashtiring: $tgx\cdot tgy+(tgx+tgy)\cdot ctg(x+y)$
A) 1 B) -1 C) 2 D) 0
30. Soddalashtiring: $\left(\frac{1}{\sin^2 x}-1\right)\cdot\left(\frac{1}{\cos^2 x}-1\right)$
A) 1 B) -1 C) 2 D) 0
31. Soddalashtiring: $tgx\cdot tgy-(tgx-tgy)\cdot ctg(x-y)$
A) -1 B) 1 C) 2 D) 0

32. Soddalashtiring: $\frac{3tgx-tg^3x}{1-3tg^2x}\cdot ctg3x$.
A) 1 B) -1 C) 2 C) 0

33. Hisoblang: $\sin 2^0+\sin 3^0+\sin 4^0+...+\sin 358^0$.
A) 0 B) 1 C) -1 D) $\sin 179^0$

34. Hisoblang: $\sin 1^0+\sin 2^0+\sin 3^0+...+\sin 359^0$.
A) 0 B) 1 C) -1 D) $\sin 179^0$

35. Hisoblang: $\cos 1^0+\cos 2^0+\cos 3^0+...+\cos 179^0$.
A) 0 B) 1 C) -1 D) $\cos 89^0$

36. Hisoblang: $ctg15^0+ctg30^0+ctg45^0+...+ctg165^0$.
A) 0 B) 1 C) -1 D) $ctg89^0$

37. Hisoblang: $tg20^0+tg40^0+tg60^0+...+tg160^0$.
A) 0 B) 1 C) -1 D) $tg20^0$

38. Agar a natural sonni 36 ga bo'lganda bo'linma n ga, qoldiq n^3 ga teng bo'lsa, a sonining eng katta qiymatini toping.
A) 205 B) 432 C) 160 D) 117

39. Agar a natural sonni 64 ga bo'lganda bo'linma n ga, qoldiq n^3 ga teng bo'lsa, a sonining eng katta qiymatini toping.
A) 219 B) 136 C) 65 D) 262

40. Agar a natural sonni 49 ga bo'lganda bo'linma n ga, qoldiq n^3 ga teng bo'lsa, a sonining eng katta qiymatini toping.
A) 330 B) 270 C) 212 D) 117

41. Agar a natural sonni 125 ga bo'lganda bo'linma n ga, qoldiq n^3 ga teng bo'lsa, a sonining eng katta qiymatini toping.
A) 564 B) 508 C) 966 D) 402

42. Agar a natural sonni 100 ga bo'lganda bo'linma n ga, qoldiq n^3 ga teng bo'lsa, a sonining eng katta qiymatini toping.
A) 981 B) 864 C) 1100 D) 749

43. Hisoblang: $\arcsin(\sin 3)$
A) $\pi-3$ B) 3 C) $\frac{\pi}{2}-3$ D) 0

44. Hisoblang: $\arccos(\cos 4)$
A) $2\pi-4$ B) 4 C) $\pi-4$ D) 0

45. Hisoblang: $\arcsin(\sin 10)$
A) $3\pi-10$ B) 10 C) $10-3\pi$ D) 0

46. Hisoblang: $\arccos(\cos 3)$
A) 3 B) $\pi-3$ C) $\frac{\pi}{2}-3$ D) 0

47. Hisoblang: $\arcsin(\sin 1)$
A) 1 B) $\frac{\pi}{2}-1$ C) $\pi-1$ D) 0

48. Hisoblang: $1\cdot4+2\cdot7+3\cdot10+...+6\cdot19$
A) 294 B) 448 C) 320 D) 500

49. Hisoblang: $1\cdot4+2\cdot7+3\cdot10+...+7\cdot22$
A) 448 B) 740 C) 320 D) 500

50. Hisoblang: $1\cdot4+2\cdot4+3\cdot10+...+8\cdot25$
A) 648 B) 640 C) 720 D) 900

51. Hisoblang: $1\cdot4+2\cdot4+3\cdot10+...+9\cdot28$
A) 900 B) 740 C) 1210 D) 960

52. Hisoblang: $1\cdot4+2\cdot4+3\cdot10+...+10\cdot31$
A) 1210 B) 1200 C) 1440 D) 900

53. Hisoblang: $1\cdot4+2\cdot4+3\cdot10+...+11\cdot34$
A) 1584 B) 1210 C) 1440 D) 2028

54. Hisoblang: $1\cdot4+2\cdot4+3\cdot10+...+12\cdot37$
A) 2028 B) 1584 C) 1440 D) 1210

55. $a\cdot b\cdot c=4$ bo'lsa, $\left(\frac{1}{a}-bc\right)\left(\frac{2}{b}-ac\right)\left(\frac{3}{c}-ab\right)$ ko'paytmaning qiymatini toping.
A) -1,5 B) 0,(6) C) 1 D) 1,(6)

56. $a\cdot b\cdot c=5$ bo'lsa, $\left(\frac{2}{a}-bc\right)\left(\frac{3}{b}-ac\right)\left(\frac{4}{c}-ab\right)$ ko'paytmaning qiymatini toping.
A) -1,2 B) 0,8 C) 1 D) -0,(6)

57. $a\cdot b\cdot c=6$ bo'lsa, $\left(\frac{3}{a}-bc\right)\left(\frac{4}{b}-ac\right)\left(\frac{5}{c}-ab\right)$ ko'paytmaning qiymatini toping.
A) -1 B) 0,(6) C) 1 D) -1,(6)

58. $a\cdot b\cdot c=7$ bo'lsa, $\left(\frac{4}{a}-bc\right)\left(\frac{5}{b}-ac\right)\left(\frac{6}{c}-ab\right)$ ko'paytmaning qiymatini toping.
A) -6/7 B) 4/7 C) 1 D) -5/7

59. $a\cdot b\cdot c=8$ bo'lsa, $\left(\frac{5}{a}-bc\right)\left(\frac{6}{b}-ac\right)\left(\frac{7}{c}-ab\right)$ ko'paytmaning qiymatini toping.
A) -3/4 B) 3/8 C) 1 D) -5/8

60. Ketma-ket kelgan ikkita musbat juft sonlar kvadratlarining ayirmasi 116 ga teng. ushbu sonlardan kichigini toping.
A) 28 B) 30 C) 26 D) 32

61. Ketma-ket kelgan ikkita musbat juft sonlar kvadratlarining ayirmasi 152 ga teng. ushbu sonlardan kichigini toping.
A) B) 30 C) 26 D) 32

62. Ketma-ket kelgan ikkita musbat juft sonlar kvadratlarining ayirmasi 124 ga teng. ushbu sonlardan kichigini toping.
A) 30 B) 30 C) 26 D) 32

63. Ketma-ket kelgan ikkita musbat juft sonlar kvadratlarining ayirmasi 108 ga teng. ushbu sonlardan kichigini toping.
A) 26 B) 30 C) 26 D) 32

64. Ketma-ket kelgan ikkita musbat juft sonlar kvadratlarining ayirmasi 132 ga teng. ushbu sonlardan kichigini toping.
A) 120 B) 30 C) 26 D) 32

65. Ketma-ket kelgan ikkita musbat juft sonlar kvadratlarining ayirmasi 120 ga teng. ushbu sonlardan kichigini toping.
A) 29 B) 30 C) 26 D) 32

66. Ikki son yig'indisi 242 ga, bu sonlardan kattasini kichigig bo'lganda bo'linma 4 ga, qoldiq esa 22 ga teng bo'ldi. Shu sonlardan kichigini toping.
A) 44 B) 52 C) 42 D) 56

67. Agar $x<-2$ bo'lsa, $\sqrt{x^2+6x+1+\sqrt{9-12x+4x^2}}$ ifodani soddalashtiring.
A) –x-2 B) x+2 C) 2-x D) -2x

68. Agar $x<-2$ bo'lsa, $\sqrt{x^2+5x+2+\sqrt{4-4x+x^2}}$ ifodani soddalashtiring.
A) –x-2 B) x+2 C) 2-x D) -2x

69. Agar $x<-2$ bo'lsa, $\sqrt{x^2+8x+6+\sqrt{9-12x+4x^2}}$ ifodani soddalashtiring.
A) –x-3 B) x+2 C) 2-x D) -2x

70. Agar $x<-2$ bo'lsa, $\sqrt{x^2+7x+7+\sqrt{4-4x+x^2}}$ ifodani soddalashtiring.
A) –x-3 B) x+2 C) 2-x D) -2x

71. Agar $x<-2$ bo'lsa, $\sqrt{x^2+7x+6+\sqrt{9-6x+x^2}}$ ifodani soddalashtiring.
A) –x-3 B) x+2 C) 2-x D) -2x

72. Agar $x<-2$ bo'lsa, $\sqrt{x^2+9x+12+\sqrt{16-8x+x^2}}$ ifodani soddalashtiring.
A) –x-4 B) x+2 C) 2-x D) -2x

73. Agar $x<-2$ bo'lsa, $\sqrt{x^2+11x+20+\sqrt{25-10x+x^2}}$ ifodani soddalashtiring.
A) –x-5 B) x+2 C) 2-x D) -2x

74. Agar $x<-2$ bo'lsa, $\sqrt{x^2+13x+30+\sqrt{36-12x+x^2}}$ ifodani soddalashtiring.
A) –x-6 B) x+2 C) 2-x D) -2x

75. Agar $2^a=81, 3^b=8$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

76. Agar $2^a=27, 3^b=16$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

77. Agar $5^a=36, 6^b=125$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 6 B) 7 C) 13 D) 10

78. Agar $7^a=25, 5^b=49$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 4 B) 11 C) 13 D) 10

79. Agar $2^a=27, 3^b=16$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

80. Agar $2^a=125, 5^b=16$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

81. Agar $5^a=27, 3^b=625$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

82. Agar $4^a=27, 3^b=64$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

83. Agar $2^a=25, 3^b=64$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 12 B) 11 C) 13 D) 10

84. Agar $5^a=64, 4^b=125$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 9 B) 11 C) 13 D) 10

85. Agar $5^a=36, 3^b=625$ bo'lsa, $a\cdot b$ ning qiymatini toping.
A) 8 B) 11 C) 13 D) 10

86. Agar $a=1\cdot2+2\cdot3+3\cdot4+...+40\cdot41$,
$b=5\cdot4+10\cdot6+15\cdot8+...+200\cdot82$ bo'lsa, a/b ning qiymatini toping.
A) 0,1 B) 0,5 C) 1 D) 2

87. Agar $a=1\cdot2+2\cdot3+3\cdot4+...+40\cdot41$,
$b=6\cdot4+12\cdot6+18\cdot8+...+240\cdot82$ bo'lsa, a/b ning qiymatini toping.
A) 1/12 B) 1/6 C) 1 D) 1/8

88. Agar $a=1\cdot2+2\cdot3+3\cdot4+...+40\cdot41$,
$b=4\cdot4+8\cdot6+12\cdot8+...+160\cdot82$ bo'lsa, a/b ning qiymatini toping.
A) 1/8 B) 1/4 C) 1 D) 2

89. Agar $a=1\cdot2+2\cdot3+3\cdot4+...+40\cdot41$,
$b=3\cdot4+6\cdot6+9\cdot8+...+120\cdot82$ bo'lsa, a/b ning qiymatini toping.
A) 1/6 B) 0,5 C) 1/7 D) 2

90. Agar $a=1\cdot2+2\cdot3+3\cdot4+...+40\cdot41$,
$b=10\cdot4+20\cdot6+30\cdot8+...+400\cdot82$ bo'lsa, a/b ning qiymatini toping.
A) 0,05 B) 0,5 C) 1 D) 2

91. Agar $a=1\cdot2+2\cdot3+3\cdot4+...+40\cdot41$,
$b=5\cdot4+10\cdot6+15\cdot8+...+200\cdot82$ bo'lsa, a/b ning qiymatini toping.
A) 0,1 B) 0,5 C) 1 D) 2

92. a,b,c musbat butun sonlar uchun $x=3a+2=5b+4=7c+6$ tengliklar bajarilsa, x uch xonali sonning eng katta qiymatini toping.
A) 944 B) 999 C) 645 D) 976

93. a,b,c musbat butun sonlar uchun $x=3a+2=5b+4=7c+6$ tengliklar bajarilsa, x uch xonali sonning eng kichik qiymatini toping.
A) 104 B) 106 C) 145 D) 116

94. a,b,c musbat butun sonlar uchun $x=4a+3=5b+4=6c+5$ tengliklar bajarilsa, x uch xonali sonning eng katta qiymatini toping.
A) 959 B) 999 C) 645 D) 976

95. a,b,c musbat butun sonlar uchun $x=4a+3=5b+4=6c+5$ tengliklar bajarilsa, x uch xonali sonning eng kichik qiymatini toping.
A) 119 B) 163 C) 134 D) 121

96. a,b,c musbat butun sonlar uchun $x=5a+4=6b+5=7c+6$ tengliklar bajarilsa, x uch xonali sonning eng kichik qiymatini toping.
A) 839 B) 163 C) 134 D) 121

97. Agar $27,3\cdot10^n=0,0000273$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

98. Agar $47,8\cdot10^n=0,0000478$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

99. Agar $65,2\cdot10^n=0,0000652$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

100. Agar $11,2\cdot10^n=0,0000112$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

101. Agar $94,6\cdot10^n=0,0000946$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

102. Agar $10,2\cdot10^n=0,0000102$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

103. Agar $21,8\cdot10^n=0,0000218$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

104. Agar $99,8\cdot10^n=0,0000998$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

105. Agar $26,4\cdot10^n=0,0000264$ bo'lsa, n ni toping.
A) -6 B) -7 C) -5 D) -4

106. 1,8,27,64,125,…ketma-ketlikning 10-hadini toping.
A) 1000 B) 512 C) 729 D) 1331

107. 1,4,9,16, 25,…ketma-ketlikning 10-hadini toping.
A) 100 B) 52 C) 72 D) 131

108. 1,16,81,256,625,…ketma-ketlikning 10-hadini toping.
A) 10000 B) 5124 C) 7029 D) 1331

109. 1,4,9,16,25,…ketma-ketlikning 9-hadini toping.
A) 81 B) 64 C) 125 D) 100

110. 1,16,81,256,625,…ketma-ketlikning 10-hadini toping.
A) 6561 B) 10000 C) 4096 D) 2401

111. 1,8,27,64,125,…ketma-ketlikning 9-hadini toping.
A) 729 B) 512 C) 1000 D) 1331

112. Agar $25^x=12$ bo'lsa, 5^x ning qiymatini toping.
A) $2\sqrt{3}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

113. Agar $25^x=24$ bo'lsa, 5^x ning qiymatini toping.
A) $2\sqrt{6}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

114. Agar $25^x=45$ bo'lsa, 5^x ning qiymatini toping.
A) $3\sqrt{5}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

115. Agar $25^x = 32$ bo'lsa, 5^x ning qiymatini toping.
A) $4\sqrt{2}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

116. Agar $25^x = 27$ bo'lsa, 5^x ning qiymatini toping.
A) $3\sqrt{3}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

117. Agar $25^x = 72$ bo'lsa, 5^x ning qiymatini toping.
A) $6\sqrt{2}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

118. Agar $25^x = 48$ bo'lsa, 5^x ning qiymatini toping.
A) $4\sqrt{3}$ B) $2\sqrt{2}$ C) $3\sqrt{2}$ D) $2\sqrt{5}$

119. Agar $x\sqrt{x} - 8\sqrt{x} = 7$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 7 B) 6 C) 3 D) 8

120. Agar $x\sqrt{x} - 7\sqrt{x} = 6$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 6 B) 7 C) 3 D) 8

121. Agar $x\sqrt{x} - 9\sqrt{x} = 8$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 8 B) 6 C) 3 D) 8

122. Agar $x\sqrt{x} - 10\sqrt{x} = 9$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 9 B) 6 C) 3 D) 8

123. Agar $x\sqrt{x} - 11\sqrt{x} = 10$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 10 B) 7 C) 11 D) 8

124. Agar $x\sqrt{x} - 12\sqrt{x} = 11$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 11 B) 6 C) 3 D) 8

125. Agar $x\sqrt{x} - 13\sqrt{x} = 12$ bo'lsa, $x - \sqrt{x}$ ning qiymatini toping.
A) 13 B) 12 C) 3 D) 8

126. 180 gr suvga 70 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 28 B) 25 C) 30 D) 22

127. 480 gr suvga 20 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 4 B) 5 C) 7 D) 8

128. 270 gr suvga 30 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 10 B) 15 C) 12 D) 20

129. 360 gr suvga 90 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 20 B) 25 C) 30 D) 22

130. 180 gr suvga 60 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 25 B) 28 C) 30 D) 22

131. 420 gr suvga 180 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 30 B) 28 C) 25 D) 22

132. 390 gr suvga 110 gr tuz aralashtirildi. Hosil bo'lgan aralashmaning necha foizi tuzdan iborat bo'ladi?
A) 22 B) 28 C) 30 D) 25

133. Agar $ctg\alpha = -0,5$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) -2/11 B) 5,5 C) -1/11 D) 1/6

134. Agar $ctg\alpha = -\frac{1}{3}$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) -9/13 B) 4,5 C) -3/13 D) 6/13

135. Agar $ctg\alpha = -\frac{1}{4}$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) -52/47 B) 4,5 C) -3/13 D) 6/13

136. Agar $ctg\alpha = 0,5$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) 2/11 B) 4,5 C) -3/13 D) 6/13

137. Agar $ctg\alpha = 1/3$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) 9/13 B) 4,5 C) -3/13 D) 6/13

138. Agar $ctg\alpha = 0,25$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A)52/47 B) 4,5 C) -3/13 D) 6/13

139. Agar $ctg\alpha = -\frac{1}{5}$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) -55/37 B) 4,5 C) -3/13 D) 6/13

140. Agar $ctg\alpha = -\frac{1}{3}$ bo'lsa, $tg3\alpha$ ning qiymatini toping.
A) 55/37 B) 4,5 C) -3/13 D) 6/13

141. $\frac{7}{1+\frac{2}{x-1}}$ kasr ma'noga ega bo'lmaydigan barcha x larning yig'indisini toping.
A) 0 B) -1 C) 1 D) -2

142. $\frac{4}{1+\frac{3}{x-1}}$ kasr ma'noga ega bo'lmaydigan barcha x larning yig'indisini toping.
A) -1 B) 0 C) 1 D) -2

143. $\frac{37}{1+\frac{4}{x-1}}$ kasr ma'noga ega bo'lmaydigan barcha x larning yig'indisini toping.
A) -2 B) -1 C) 1 D) 0

144. $\frac{8}{1+\frac{1}{x-1}}$ kasr ma'noga ega bo'lmaydigan barcha x larning yig'indisini toping.
A) 1 B) -1 C) 0 D) -2

145. $\frac{9}{1+\frac{8}{x-1}}$ kasr ma'noga ega bo'lmaydigan barcha x larning yig'indisini toping.
A) -6 B) -1 C) 1 D) -2

146. $2016\cdot(2017\cdot 2018+1)$ ifoda quyidailardan qaysi biriga teng?
A) 2017^3-1 B) 2017^2-1 C) $2017\cdot 2018$
D) 2017^3+1

147. $2015\cdot(2017\cdot 2016+1)$ ifoda quyidailardan qaysi biriga teng?
A) 2016^3-1 B) 2016^2-1 C) $2016\cdot 2017$
D) 2016^3+1

148. $2013\cdot(2014\cdot 2015+1)$ ifoda quyidailardan qaysi biriga teng?
A) 2014^3-1 B) 2014^2-1 C) $2013\cdot 2015$
D) 2016^3+1

149. $2017\cdot(2019\cdot 2018+1)$ ifoda quyidailardan qaysi biriga teng?
A) 2018^3-1 B) 2018^2-1 C) $2019\cdot 2018$
D) 2018^3+1

150. $2014\cdot(2016\cdot 2015+1)$ ifoda quyidailardan qaysi biriga teng?
A) 2015^3-1 B) 2015^2-1 C) $2014\cdot 2015$
D) 2016^3+1

151. Agar $\sqrt[3]{a+\sqrt[3]{a+\sqrt[3]{a+}...}} = 2$ bo'lsa, $\sqrt{a-\sqrt{a-\sqrt{a-}...}}$ ning qiymatini toping.
A) 3 B) 1 C) 4 D) 2

152. Agar $x=\sqrt{42-\sqrt{42-\sqrt{42-}...}}$, $y=\sqrt{x+\sqrt{x+\sqrt{x+}...}}$, $z=\sqrt{y\sqrt{y\sqrt{y\cdot}...}}$ bo'lsa, x+y+z ning qiymatini toping.
A) 12 B) 11 C) 14 D) 10

153. Agar $\sqrt{6+\sqrt{6+\sqrt{6+}...}}=a$ bo'lsa, $\sqrt{a\cdot\sqrt{a\cdot\sqrt{a\cdot}...}}$ ifodaning qiymatini toping.
A) 3 B) 1 C) 4 D) 2

154. Agar $\sqrt[5]{a+\sqrt[5]{a+\sqrt[5]{a+}...}}=2$ bo'lsa, $\sqrt{a-\sqrt{a-\sqrt{a-}...}}$ ning qiymatini toping.
A) 5 B) 3 C) 4 D) 2

155. Agar $\sqrt{a+\sqrt{a+\sqrt{a+}...}}=3$ bo'lsa, $\sqrt{a-\sqrt{a-\sqrt{a-}...}}$ ning qiymatini toping.
A) B) C) D)

156. Agar $\sqrt{20+\sqrt{20+\sqrt{20+}...}}=a$ bo'lsa, $\sqrt{14a+\sqrt{14a+\sqrt{14a+}...}}$ ning qiymatini toping.
A) 8 B) 5 C) 4 D) 7

157. Agar $\sqrt{tg\alpha-\sqrt{tg\alpha-\sqrt{tg\alpha-}...}}=1$ bo'lsa, $\cos 2\alpha$ ning qiymatini toping.
A) -0,6 B) -0,8 C) -0,96 D) -0,28

158. Agar $\sqrt{\sin\alpha-\sqrt{\sin\alpha-\sqrt{\sin\alpha-}...}}=0,5$ bo'lsa, $\sin\alpha$ ning qiymatini toping.
A) 3/4 B) 4/5 C) 24/25 D) 7/25

159. Agar $\sqrt{30+\sqrt{30+\sqrt{30+}...}}=a$ bo'lsa, $\sqrt{a+\sqrt{a+\sqrt{a+}...}}$ ning qiymatini toping.
A) 3 B) 5 C) 4 D) 2

160. Ifodani soddalashtiring: $\frac{a^4-10a^2+169}{a^2+6a+13}$
A) $a^2-6a+13$ B) a^2+13 C) $a^2-5a+13$ D) $a^2-3a+13$

161. Ifodani soddalashtiring: $\frac{a^4+a^2+169}{a^2+5a+13}$
A) $a^2-6a+13$ B) a^2+13 **C)** $a^2-5a+13$ D) $a^2-3a+13$

162. Ifodani soddalashtiring: $\frac{a^4+17a^2+169}{a^2+3a+13}$
A) $a^2-6a+13$ B) a^2+13 C) $a^2-5a+13$ **D)** $a^2-3a+13$

163. Ifodani soddalashtiring: $\frac{a^4+a^2+1}{a^2+a+1}$
A) a^2-a+1 B) a^2+13 C) $a^2-5a+13$
D) $a^2-3a+13$

164. Ifodani soddalashtiring: $\frac{a^4+7a^2+16}{a^2+a+4}$
A) a^2-a+4 B) a^2+13 C) $a^2-5a+13$
D) $a^2-3a+13$

165. Ifodani soddalashtiring: $\frac{a^4+4a^2+100}{a^2+4a+10}$
A) $a^2-4a+10$ B) a^2+13 C) $a^2-5a+13$ D) $a^2-3a+13$

166. Ifodani soddalashtiring: $\frac{a^4-17a^2+1}{a^2+7a+1}$
A) a^2-7a+1 B) a^2+13 C) $a^2-5a+13$
D) $a^2-3a+13$

167. a ning qanday qiymatida $\frac{9x^2-6x+1}{9}=(x+a)^2$ tenglik ayniyat bo'ladi?
A) -1/3 B) -1 C) -1/4 D) -1/2

168. a ning qanday qiymatida $\frac{4x^2-4x+1}{4}=(x+a)^2$ tenglik ayniyat bo'ladi?
A) -1/3 B) -1 C) -1/4 **D)** -1/2

169. a ning qanday qiymatida $\frac{16x^2-8x+1}{16}=(x+a)^2$ tenglik ayniyat bo'ladi?
A) -1/3 B) -1 **C)** -1/4 D) -1/2

170. a ning qanday qiymatida $\frac{9x^2-18x+9}{9}=(x+a)^2$ tenglik ayniyat bo'ladi?
A) -1/3 **B)** -1 C) -1/4 D) -1/2

171. a ning qanday qiymatida $\frac{25x^2-10x+1}{25}=(x+a)^2$ tenglik ayniyat bo'ladi?
A) -1/5 B) -1 C) -1/4 D) -1/2

172. $y=x^2$ funksiya grafigini o'ngga ikki birlik, yuqoriga uch birlik siljitish(parallel ko'chirish) natijasida hosil bo'lgan parabola tenglamasini toping.
A) $y=x^2-4x+7$ B) $y=x^2-4x+3$
C) $y=x^2-3x+4$ D) $y=x^2-2x+3$

173. $y=x^2$ funksiya grafigini o'ngga bir birlik, yuqoriga uch birlik siljitish(parallel ko'chirish) natijasida hosil bo'lgan parabola tenglamasini toping.
A) $y=x^2-2x+4$ B) $y=x^2-4x+3$
C) $y=x^2-3x+4$ D) $y=x^2-2x+3$

174. $y=x^2$ funksiya grafigini chapga ikki birlik, yuqoriga bir birlik siljitish(parallel ko'chirish) natijasida hosil bo'lgan parabola tenglamasini toping.
A) $y=x^2+2x+2$ B) $y=x^2-4x+3$
C) $y=x^2-3x+4$ D) $y=x^2-2x+3$

175. $y=x^2$ funksiya grafigini chapga bir birlik, pastga ikki birlik siljitish(parallel ko'chirish) natijasida hosil bo'lgan parabola tenglamasini toping.
A) $y=x^2+2x-1$ B) $y=x^2-4x+3$
C) $y=x^2-3x+4$ D) $y=x^2-2x+3$

176. $y=x^2$ funksiya grafigini o'ngga ikki birlik, pastga uch birlik siljitish(parallel ko'chirish) natijasida hosil bo'lgan parabola tenglamasini toping.
A) $y=x^2+4x+1$ B) $y=x^2-4x+3$
C) $y=x^2-3x+4$ D) $y=x^2-2x+3$

177. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 9 ga teng. agar 4a=5b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 81 B) 36 C) 24) 72

178. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 6 ga teng. agar 4a=3b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 42 B) 36 C) 24) 72

179. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 10 ga teng. agar 7a=5b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 120 B) 36 C) 24) 72

180. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 7 ga teng. agar 3a=7b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 70 B) 36 C) 24) 72

181. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 11 ga teng. agar 3a=8b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 121 B) 36 C) 24) 72

182. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 5 ga teng. agar 2a=9b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 55 B) 36 C) 24) 72

183. a va b sonlar natural sonlar bo'lib, ularning eng katta umumiy bo'luvchisi 8 ga teng. agar 9a=10b tenglik o'rinli bo'lsa, a+b ning qiymatini toping.
A) 152 B) 36 C) 24) 72

184. Agar a+b va 12a-b tub sonlar bo'lib, $\frac{a+b}{12a-b}=\frac{21}{57}$ tenglik bajarilsa, a sonini toping.
A) 2 B) 4 C) 5 D) 3

185. Agar a+b va 3a-2b tub sonlar bo'lib, $\frac{a+b}{3a-2b}=\frac{32}{26}$ tenglik bajarilsa, a sonini toping.
A) 2 B) 4 C) 5 D) 3

186. Agar a+b va 5a-b tub sonlar bo'lib, $\frac{a+b}{5a-b}=\frac{33}{57}$ tenglik bajarilsa, a sonini toping.
A) 2 B) 4 C) 5 D) 3

187. Agar a+b va 9a-2b tub sonlar bo'lib, $\frac{a+b}{9a-2b}=\frac{14}{38}$ tenglik bajarilsa, a sonini toping.
A) 2 B) 4 C) 5 D) 3

188. Agar a+b va a-3b tub sonlar bo'lib, $\frac{a+b}{a-3b}=\frac{42}{10}$ tenglik bajarilsa, a sonini toping.
A) 2 B) 4 C) 5 D) 3

189. Agar a+b va 3a-b tub sonlar bo'lib, $\frac{a+b}{3a-b}=\frac{45}{39}$ tenglik bajarilsa, a sonini toping.
A) 2 B) 4 C) 5 D) 3

190. $\left(a^2-2a+1\right)x=a^2+2a-3$ tenglama a ning qanday qiymatida cheksiz ko'p yechimga ega?
A) 1 B) -3 C) 1; -3 D) 0

191. $\left(a^2-4a+4\right)x=a^2-2a+3$ tenglama a ning qanday qiymatida cheksiz ko'p yechimga ega?
A) 2 B) 1 C) 1; 2 D) 0

192. $\left(a^2-6a+9\right)x=a^2-4a+3$ tenglama a ning qanday qiymatida cheksiz ko'p yechimga ega?
A) 3 B) 1 C) 1; 3 D) 0

193. $\left(a^2-10a+25\right)x=a^2-4a-5$ tenglama a ning qanday qiymatida cheksiz ko'p yechimga ega?
A) 5 B) -1 C) 1; -5 D) 0

194. $\left(a^2-4\right)x=a^2+a-2$ tenglama a ning qanday qiymatida cheksiz ko'p yechimga ega?
A) -2 B) 1 C) 2; -2 D) 0

195. $\left(a^2-9\right)x=a^2+2a-3$ tenglama a ning qanday qiymatida cheksiz ko'p yechimga ega?
A) -3 B) 1 C) 1; -3 D) 0

196. $(5-x)(x+3)>0$ tengsizlikning butun yechimlari yig'indisini toping.
A) 7 B) 6 C) -5 D) -3

197. $(3-x)(x+2)>0$ tengsizlikning butun yechimlari yig'indisini toping.
A) 2 B) -3 C) -5 D) 0

198. $(1-x)(x+3)>0$ tengsizlikning butun yechimlari yig'indisini toping.
A) 2 **B)** -3 C) -5 D) 0

199. $(4-x)(x+3)>0$ tengsizlikning butun yechimlari yig'indisini toping.
A) 3 B) -3 C) -5 D) 0

200. $(6-x)(x+7)>0$ tengsizlikning butun yechimlari yig'indisini toping.
A) -6 B) -3 C) -5 D) 0

201. $(1-x)(x-8)>0$ tengsizlikni qanoatlantiruvchi tub sonlar nechta?
A) 4 B) 3 C) 5 D) 6

202. $(1-x)(x-12)>0$ tengsizlikni qanoatlantiruvchi tub sonlar nechta?
A) 5 B) 4 C) 3 D) 6

203. $(3-x)(x-15)>0$ tengsizlikni qanoatlantiruvchi tub sonlar nechta?
A) 4 B) 3 C) 5 D) 0

204. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 12 soatda to'ldiradi. Birinchi quvur hovuzning uchdan bir qismini necha soatda to'ldiradi?
A) 6 B) 4 C) 8 D) 9

205. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 12 soatda to'ldiradi. Ikkinchi quvur hovuzning uchdan bir qismini necha soatda to'ldiradi?
A) 12 B) 4 C) 8 D) 9

206. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 12 soatda to'ldiradi. Birinchi quvur hovuzning uchdan ikki qismini necha soatda to'ldiradi?
A) 12 B) 4 C) 8 D) 9

207. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 12 soatda to'ldiradi. Ikkinchi quvur hovuzning uchdan ikki qismini necha soatda to'ldiradi?
A) 24 B) 12 C) 8 D) 9

208. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 18 soatda to'ldiradi. Birinchi quvur hovuzning uchdan bir qismini necha soatda to'ldiradi?
A) 9 B) 4 C) 12 D) 9

209. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 18 soatda to'ldiradi. Ikkinchi quvur hovuzning uchdan bir qismini necha soatda to'ldiradi?
A) 18 B) 12 C) 6 D) 9

210. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 12 soatda to'ldiradi. Birinchi quvur hovuzning uchdan bir qismini necha soatda to'ldiradi?
A) 6 B) 4 C) 8 D) 9

211. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 18 soatda to'ldiradi. Birinchi quvur hovuzning uchdan ikki qismini necha soatda to'ldiradi?
A) 18 B) 6 C) 8 D) 9

212. Birinchi quvurdan ikkinchi quvurga qaraganda ikki barobar ko'p suv oqadi. Ikkala quvur birgalikda bo'sh hovuzni 18 soatda to'ldiradi. Ikkinchi quvur hovuzning uchdan ikki qismini necha soatda to'ldiradi?
A) 36 B) 18 C) 8 D) 9

213. Agar $x<-1,\ y>1$ bo'lsa, quyidagilardan qaysi biri har doim o'rinli?
A) $y^3>x^3$ B) $y<x^4$ C) $y^2>x^2$ D) $y^2>x^6$

214. Agar $x<-1,\ y>1$ bo'lsa, quyidagilardan qaysi biri har doim o'rinli?
A) $y^5>x^3$ B) $y<x^4$ C) $y^2>x^2$ D) $y^2>x^6$

215. Agar $x<-1,\ y>1$ bo'lsa, quyidagilardan qaysi biri har doim o'rinli?
A) $y>x^3$ B) $y<x^4$ C) $y^2>x^2$ D) $y^2>x^6$

216. Agar $x<-1,\ y>1$ bo'lsa, quyidagilardan qaysi biri har doim o'rinli?
A) $y^7>x^9$ B) $y<x^4$ C) $y^2>x^2$ D) $y^2>x^6$

217. Agar $x<-1,\ y>1$ bo'lsa, quyidagilardan qaysi biri har doim o'rinli?
A) $y^3>x^7$ B) $y<x^4$ C) $y^2>x^2$ D) $y^2>x^6$

218. Agar $x<-1,\ y>1$ bo'lsa, quyidagilardan qaysi biri har doim o'rinli?
A) $y^5>x^7$ B) $y<x^4$ C) $y^2>x^2$ D) $y^2>x^6$

219. Agar $f(2x-3)=3x+5$ bo'lsa, $f(f(1))$ ni toping.
A) 26 B) 11 C) 38 D) 16

220. Agar $f(x+4)=2x-5$ bo'lsa, $f(f(1))$ ni toping.
A) -21 B) -11 C) 38 D) 16

221. Agar $f(x-5)=3x-2$ bo'lsa, $f(f(1))$ ni toping.
A) 61 B) 59 C) 60 D) 16

222. Agar $f(3x)=3x+5$ bo'lsa, $f(f(1))$ ni toping.
A) 11 B) 20 C) 38 D) 16

223. Agar $f(4x)=4x+7$ bo'lsa, $f(f(1))$ ni toping.
A) 15 B) 11 C) 38 D) 16

224. $y=\cos^2\left(\frac{x}{3}-\frac{\pi}{4}\right)+2\sin x$ funksiyaning eng kichik musbat davrini toping.
A) 6π B) 2π C) 3π D) davriy emas

225. $y=\sin^2\left(\frac{x}{3}-\frac{\pi}{4}\right)+2tgx$ funksiyaning eng kichik musbat davrini toping.
A) 6π B) 2π C) 3π D) davriy emas

226. $y=\cos^2\left(\frac{x}{3}-\frac{\pi}{4}\right)+2ctgx$ funksiyaning eng kichik musbat davrini toping.
A) 6π **B)** 2π C) 3π D) davriy emas

227. $y=tg^2\left(\frac{x}{3}-\frac{\pi}{4}\right)+2\sin x$ funksiyaning eng kichik musbat davrini toping.
A) 6π B) 2π C) 3π D) davriy emas

228. $y=tg^2\left(\frac{x}{3}-\frac{\pi}{4}\right)+2\sin x$ funksiyaning eng kichik musbat davrini toping.
A) 6π B) 2π C) 3π D) davriy emas

229. $y=ctg^2\left(\frac{x}{3}-\frac{\pi}{4}\right)+2\cos x$ funksiyaning eng kichik musbat davrini toping.
A) 6π B) 2π C) 3π D) davriy emas

230. $\left|\frac{4-2x}{1+3x}\right|>0$ tengsizlikni yeching.
A) $(-\infty;-1/3)\cup(-1/3;2)\cup(2;\infty)$
B) $(-\infty;-1/3)\cup(-1/3;\infty)$
C) $(-\infty;-1/3)\cup(2;\infty)$
D) $(-\infty;\infty)$

231. $\left|\frac{6-2x}{1+2x}\right|>0$ tengsizlikni yeching.
A) $(-\infty;-0,5)\cup(-0,5;3)\cup(3;\infty)$
B) $(-\infty;-0,5)\cup(-0,5;\infty)$
C) $(-\infty;-0,5)\cup(3;\infty)$
D) $(-\infty;\infty)$

232. $\left|\frac{x}{1+4x}\right|>0$ tengsizlikni yeching.
A) $(-\infty;-1/4)\cup(-1/4;2)\cup(0;\infty)$
B) $(-\infty;-1/4)\cup(-1/4;\infty)$
C) $(-\infty;-1/4)\cup(0;\infty)$
D) $(-\infty;\infty)$

233. $\left|\frac{2x}{2+6x}\right|>0$ tengsizlikni yeching.
A) $(-\infty;-1/3)\cup(-1/3;0)\cup(0;\infty)$
B) $(-\infty;-1/3)\cup(-1/3;\infty)$
C) $(-\infty;-1/3)\cup(0;\infty)$
D) $(-\infty;\infty)$

234. $\left|\frac{10-2x}{1+2x}\right|>0$ tengsizlikni yeching.
A) $(-\infty;-1/2)\cup(-1/2;5)\cup(5;\infty)$
B) $(-\infty;-1/2)\cup(-1/2;\infty)$
C) $(-\infty;-1/2)\cup(5;\infty)$
D) $(-\infty;\infty)$

235. Agar $x^2-5x+2=0$ bo'lsa, $x^2+\frac{4}{x^2}$ ning son qiymatini toping.
A) 21 B) 23 C) 15 D) 18

236. Agar $x^2-6x+3=0$ bo'lsa, $x^2+\frac{9}{x^2}$ ning son qiymatini toping.
A) 30 B) 23 C) 15 D) 18

237. Agar $x^2-3x+1=0$ bo'lsa, $x^2+\frac{1}{x^2}$ ning son qiymatini toping.
A) 7 B) 8 C) 6 D) 5

238. Agar $x^2-4x+1=0$ bo'lsa, $x^2+\frac{1}{x^2}$ ning son qiymatini toping.
A) 14 B) 18 C) 16 D) 20

239. Agar $x^2-7x+4=0$ bo'lsa, $x^2+\frac{16}{x^2}$ ning son qiymatini toping.
A) 41 B) 38 C) 57 D) 18

240. Agar $x^2-4x+2=0$ bo'lsa, $x^2+\frac{4}{x^2}$ ning son qiymatini toping.
A) 12 B) 13 C) 15 D) 18

241. $A=\{1;3;5;6;8;10\}$ *va* $B=\{5;6;7;8;10\}$ to'plamlar berilgan. $A\cup B$ to'plam elementlari sonini toping.
A) 7 B) 8 C) 11 D) 6

242. $A=\{1;3;5;6;8;10\}$ *va* $B=\{5;6;7;8;10\}$ to'plamlar berilgan. $A\cap B$ to'plam elementlari sonini toping.
A) 4 B) 5 C) 7 D) 6

243. $A=\{1;3;5;6;8;10\}$ *va* $B=\{5;6;7;8;10\}$ to'plamlar berilgan. $A\cup B$ to'plamni necha xil usul bilan ikkita kesishmaydigan qism to'plamlarga ajratish mumkin?
A) 64 B) 8 C) 11 D) 6

244. $A=\{1;3;5;6;8;10\}$ *va* $B=\{5;6;7;8;10\}$ to'plamlar berilgan. $A\cap B$ to'plamni necha xil usul bilan ikkita kesishmaydigan qism to'plamlarga ajratish mumkin?
A) 8 B) 7 C) 11 D) 6

245. $A=\{1;3;5;6;8;10\}$ *va* $B=\{5;6;7;8;10\}$ to'plamlar berilgan. $A\cup B$ to'plamning qism to'plamlari sonini toping.
A) 128 B) 256 C) 64 D) 32

246. $A=\{1;3;5;6;8;10\}$ *va* $B=\{5;6;7;8;10\}$ to'plamlar berilgan. $A\cap B$ to'plamning qism to'plamlari sonini toping.
A) 16 B) 32 C) 64 D) 8

247. Agar $\sqrt{3x+2y-13}+\sqrt{4x-y-10}=0$ bo'lsa, x va y sonlarining ko'paytmasini toping.
A) 6 B) 8 C) -2 D) -4

248. Agar $\sqrt{4x+y-13}+\sqrt{5x-2y-13}=0$ bo'lsa, x va y sonlarining ko'paytmasini toping.
A) 3 B) 8 C) -2 D) -4

249. Agar $\sqrt{5x-y-7}+\sqrt{x+2y-19}=0$ bo'lsa, x va y sonlarining ko'paytmasini toping.
A) 24 B) 8 C) -2 D) -4

250. Agar $\sqrt{6x+y-25}+\sqrt{7x-y-27}=0$ bo'lsa, x va y sonlarining ko'paytmasini toping.
A) 4 B) 8 C) -2 D) -4

251. Agar $\sqrt{x+y-25}+\sqrt{x-y-1}=0$ bo'lsa, x va y sonlarining ko'paytmasini toping.
A) 156 B) 8 C) -2 D) -4

252. $x^7\cdot\left|x^2+8x+7\right|<0$ tengsizlik $[-8;1]$ kesmada nechta butun yechimga ega?
A) 6 B) 8 C) 5 D) 7

253. $x^5\cdot\left|x^2-7x-8\right|<0$ tengsizlik $[-8;1]$ kesmada nechta butun yechimga ega?
A) 7 B) 8 C) 5 D) 6

254. $x^9\cdot\left|x^2+4x+4\right|<0$ tengsizlik $[-8;1]$ kesmada nechta butun yechimga ega?
A) 7 B) 8 C) 5 D) 6

255. $x^3\cdot\left|x^2+7x+12\right|<0$ tengsizlik $[-8;1]$ kesmada nechta butun yechimga ega?
A) 6 B) 8 C) 5 D) 7

256. $x\cdot\left|x^2+4x+3\right|<0$ tengsizlik $[-8;1]$ kesmada nechta butun yechimga ega?
A) 6 B) 8 C) 5 D) 7

257. Toq sonning o'zidan keyin keluvchi uchta toq son bilan yig'indisi 49 dan katta. Ushbu shartni qanoatlantiruvchi toq sonlardan eng kichigini toping.
A) 9 B) 15 C) 11 D) 13

258. Toq sonning o'zidan oldin keluvchi uchta toq son bilan yig'indisi 49 dan katta. Ushbu shartni qanoatlantiruvchi toq sonlardan eng kichigini toping.
A) 9 **B)** 15 C) 11 D) 13

259. Juft sonning o'zidan keyin keluvchi uchta juft son bilan yig'indisi 70 dan katta. Ushbu shartni qanoatlantiruvchi juft sonlardan eng kichigini toping.
A) 16 B) 14 C) 18 D) 20

260. Juft sonning o'zidan oldin keluvchi uchta juft son bilan yig'indisi 70 dan katta. Ushbu shartni qanoatlantiruvchi juft sonlardan eng kichigini toping.
A) 22 B) 20 C) 24 D) 26

261. Toq sonning o'zidan keyin keluvchi uchta juft son bilan yig'indisi 49 dan katta. Ushbu shartni qanoatlantiruvchi toq sonlardan eng kichigini toping.
A) 9 B) 15 **C)** 11 D) 13

262. Toq sonning o'zidan keyin keluvchi uchta juft son bilan yig'indisi 70 dan katta. Ushbu shartni qanoatlantiruvchi toq sonlardan eng kichigini toping.
A) 17 B) 15 C) 11 D) 13

263. Juft sonning o'zidan keyin keluvchi juft sonning uchlangani bilan yig'indisi 70 dan kichik. Ushbu shartni qanoatlantiruvchi juft sonlardan eng kattasini toping.
A) 14 B) 15 C) 11 D) 13

264. Juft sonning o'zidan oldin keluvchi juft sonning uchlangani bilan yig'indisi 70 dan kichik. Ushbu shartni qanoatlantiruvchi juft sonlardan eng kattasini toping.
A) 12 B) 16 C) 11 D) 13

265. Toq sonning o'zidan keyin keluvchi toq sonning ikkilangani bilan yig'indisi 49 dan katta. Ushbu shartni qanoatlantiruvchi toq sonlardan eng kattasini toping.
A) 13 B) 15 C) 11 D) 9

266. Toq sonning o'zidan oldin keluvchi toq sonning ikkilangani bilan yig'indisi 49 dan kichik. Ushbu shartni qanoatlantiruvchi toq sonlardan eng kattasini toping.
A) 17 B) 15 C) 11 D) 13

267. Hisoblang:
$\left(2^2+6^2+10^2+14^2+18^2\right)-\left(1+5^2+9^2+13^2+17^2\right)$.
A) 95 B) 104 C) 128 D) 144

268. Hisoblang:
$\left(2^2+6^2+10^2+14^2+18^2+20^2\right)-\left(1+5^2+9^2+13^2+17^2+19^2\right)$.
A) 134 B) 104 C) 128 D) 144

269. Hisoblang: $\left(2^2+6^2+10^2+14^2\right)-\left(1+5^2+9^2+13^2\right)$.
A) 60 B) 104 C) 128 D) 144

270. Hisoblang:
$\left(4^2+10^2+16^2+22^2+28^2\right)-\left(3^2+9^2+15^2+21^2+27^2\right)$.
A) 95 B) 104 C) 128 D) 144

271. Agar $f(x)=(a+b-4)\cdot x^3+2x^2+(b-1)\cdot x$ juft funksiya berilgan bo'lsa, $f(a)$ ning qiymatini toping.
A) 18 B) 14 C) 12 D) 20

272. Agar $f(x)=(a+b-4)\cdot x^3+2x^2+(b-1)\cdot x$ juft funksiya berilgan bo'lsa, $f(b)$ ning qiymatini toping.
A) 2 B) 4 C) 6 D) 0

273. Agar $f(x)=(a+b-4)\cdot x^3+3x^2+(b-3)\cdot x$ juft funksiya berilgan bo'lsa, $f(a)$ ning qiymatini toping.
A) 3 B) 4 C) 7 D) 5

274. Agar $f(x)=(a+b-4)\cdot x^3+3x^2+(b-3)\cdot x$ juft funksiya berilgan bo'lsa, $f(b)$ ning qiymatini toping.
A) 27 B) 24 C) 12 D) 20

275. Agar $f(x)=(a+b-4)\cdot x^3+4x^2+(b-2)\cdot x$ juft funksiya berilgan bo'lsa, $f(a)$ ning qiymatini toping.
A) 16 B) 14 C) 48 D) 32

276. Agar $f(x)=(a+b-4)\cdot x^3+4x^2+(b-2)\cdot x$ juft funksiya berilgan bo'lsa, $f(b)$ ning qiymatini toping.
A) 16 B) 14 C) 12 D) 20

277. $A=\{x:|x-2|<3, x\in N\}$ to'plamning elementlari sonini toping.
A) 4 B) 3 C) 6 D) 5

278. $A=\{x:|x-2|<3, x\in Z\}$ to'plamning elementlari sonini toping.
A) 5 B) 3 C) 6 D) 4

279. $A=\{x:|x-4|<8, x\in N\}$ to'plamning elementlari sonini toping.
A) 11 B) 12 C) 9 D) 5

280. $A=\{x:|x-1|<7, x\in N\}$ to'plamning elementlari sonini toping.
A) 7 B) 8 C) 6 D) 5

281. $A=\{x:|x-9|<1, x\in N\}$ to'plamning elementlari sonini toping.
A) 9 B) 10 C) 11 D) 8

282. $A=\{x:|x-2|<4, x\in N\}$ to'plamning elementlari sonini toping.
A) 5 B) 3 C) 4 D) 6

283. $A=\{x:|x-7|<4, x\in N\}$ to'plamning elementlari sonini toping.
A) 7 B) 3 C) 4 D) 6

284. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:|x-7|=-4, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

285. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:\sqrt{5x+4}=-7, x\in R\}$
B) $A=\{x:x^2\le 5, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

286. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:2^{3x+2}=-2, x\in R\}$
B) $A=\{x:x^2\le 4, x\in R\}$
C) $A=\{x:x^2<-x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

287. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:\arccos x=-1, x\in R\}$
B) $A=\{x:x^2\le 25, x\in R\}$
C) $A=\{x:-x^2<x, x\in R\}$
D) $A=\{x:3x-7=0, x\in R\}$

288. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:arcctgx=4, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

289. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:arctgx=\pi, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

290. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:arcctgx=-\frac{\pi}{4}, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

291. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:x^x=0, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

292. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:\lg(x^2+1)=-1, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

293. Quyidagilardan qaysi biri bo'sh to'plam?
A) $A=\{x:x^2+x+1=-4, x\in R\}$
B) $A=\{x:x^2\le 0, x\in R\}$
C) $A=\{x:x^2<x, x\in R\}$
D) $A=\{x:3x+5=0, x\in R\}$

294. Agar $a-b=|3x|^{-1}$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

295. Agar $a-b=|x|+1$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

296. Agar $a-b=|x|+4$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

297. Agar $a-b=|3x|+2$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

298. Agar $a-b=|3+x|^{-1}$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

299. Agar $a-b=|6x|^{-2}$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

300. Agar $a-b=\left|5x\right|^{-1}$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

301. Agar $a-b=\sqrt{x}+4$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

302. Agar $a-b=\dfrac{1}{\sqrt{x}}+1$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

303. Agar $a-b=\sqrt{x}+\dfrac{1}{\sqrt{x}}$ bo'lsa, a va b lar uchun to'g'ri munosabatni aniqlang.
A) $a>b$ B) $a<b$ C) $a\le b$ D) $a=b+1$

304. Ifodani soddalashtiring:
$$\frac{\dfrac{1}{a}+\dfrac{1}{b+c}}{\dfrac{1}{a}-\dfrac{1}{b+c}}\cdot\left(1+\frac{b^2+c^2-a^2}{2bc}\right):\frac{(a+b+c)^2}{bc}$$
A) 0,5 B) 1 C) b+c-a D) a+b+c

305. x,y,z butun sonlar bo'lib, $y<0$ va $\dfrac{2}{3x}=-\dfrac{3}{4y}=\dfrac{4}{5z}$ bo'lsa, x,y,z larni o'sish tartibida joylashtiring.
A) $y<x<z$ B) $z<y<x$ C) $x<y<z$ D) $y<z<x$

306. x,y,z butun sonlar bo'lib, $y<0$ va $\dfrac{4}{5x}=-\dfrac{3}{4y}=\dfrac{6}{7z}$ bo'lsa, x,y,z larni o'sish tartibida joylashtiring.
A) $y<x<z$ B) $z<y<x$ C) $x<y<z$ D) $y<z<x$

307. x,y,z butun sonlar bo'lib, $y<0$ va $\dfrac{3}{5x}=-\dfrac{3}{4y}=\dfrac{7}{8z}$ bo'lsa, x,y,z larni o'sish tartibida joylashtiring.
A) $y<x<z$ B) $z<y<x$ C) $x<y<z$ D) $y<z<x$

308. x,y,z butun sonlar bo'lib, $y<0$ va $\dfrac{8}{9x}=-\dfrac{3}{4y}=\dfrac{10}{11z}$ bo'lsa, x,y,z larni o'sish tartibida joylashtiring.
A) $y<x<z$ B) $z<y<x$ C) $x<y<z$ D) $y<z<x$

309. x,y,z butun sonlar bo'lib, $y<0$ va $\dfrac{4}{7x}=-\dfrac{3}{4y}=\dfrac{5}{8z}$ bo'lsa, x,y,z larni o'sish tartibida joylashtiring.
A) $y<x<z$ B) $z<y<x$ C) $x<y<z$ D) $y<z<x$

310. x,y,z butun sonlar bo'lib, $y<0$ va $\dfrac{11}{12x}=-\dfrac{3}{4y}=\dfrac{12}{13z}$ bo'lsa, x,y,z larni o'sish tartibida joylashtiring.
A) $y<x<z$ B) $z<y<x$ C) $x<y<z$ D) $y<z<x$

311. Ahmad bir kun, Arslon ikki kun ishlaganda bir ishning 3/8 qismini bajarishadi. Agar Ahmad uch kun, Arslon ikki kun ishlasa, aynan o'sha ishning 5/8 qismini bajarishadi. Ahmad bir o'zi ushbu ishni necha kunda tamomlaydi?
A) 8 B) 10 C) 4 D) 9

312. Ahmad bir kun, Arslon ikki kun ishlaganda bir ishning 3/8 qismini bajarishadi. Agar Ahmad uch kun, Arslon ikki kun ishlasa, aynan o'sha ishning 5/8 qismini bajarishadi. Arslon bir o'zi ushbu ishni necha kunda tamomlaydi?
A) 8 B) 10 C) 4 D) 9

313. Ahmad bir kun, Arslon ikki kun ishlaganda bir ishning 5/8 qismini bajarishadi. Agar Ahmad uch kun, Arslon ikki kun ishlasa, aynan o'sha ishning 7/8 qismini bajarishadi. Ahmad bir o'zi ushbu ishni necha kunda tamomlaydi?
A) 4 B) 10 C) 8 D) 9

314. Ahmad bir kun, Arslon ikki kun ishlaganda bir ishning 3/8 qismini bajarishadi. Agar Ahmad uch kun, Arslon ikki kun ishlasa, aynan o'sha ishning 7/8 qismini bajarishadi. Arslon bir o'zi ushbu ishni necha kunda tamomlaydi?
A) 16 B) 10 C) 4 D) 9

315. Ahmad bir kun, Arslon ikki kun ishlaganda bir ishning 5/8 qismini bajarishadi. Agar Ahmad uch kun, Arslon ikki kun ishlasa, aynan o'sha ishning 5/8 qismini bajarishadi. Ahmad bir o'zi ushbu ishni necha kunda tamomlaydi?
A) 8 B) 10 C) 4 D) 9

316. Ahmad bir kun, Arslon ikki kun ishlaganda bir ishning 5/8 qismini bajarishadi. Agar Ahmad uch kun, Arslon ikki kun ishlasa, aynan o'sha ishning 3/8 qismini bajarishadi. Ahmad bir o'zi ushbu ishni necha kunda tamomlaydi?
A) 16 B) 10 C) 4 D) 9

317. Hisoblang: $\left(\dfrac{\sqrt{6}+\sqrt{5}}{\sqrt{2}+1}\cdot\dfrac{\sqrt{6}-\sqrt{5}}{\sqrt{2}-1}\right):\left(\dfrac{1}{\sqrt{3}}-\dfrac{\sqrt{3}}{9}+\dfrac{1}{\sqrt{27}}\right)$
A) $\dfrac{\sqrt{3}}{3}$ B) $3\sqrt{3}$ C) $\sqrt{3}$ D) 1

318. Hisoblang: $\left(\dfrac{\sqrt{7}+\sqrt{6}}{\sqrt{3}+2}\cdot\dfrac{\sqrt{6}-\sqrt{7}}{\sqrt{3}-2}\right):\left(\dfrac{1}{\sqrt{3}}-\dfrac{\sqrt{3}}{9}+\dfrac{1}{\sqrt{27}}\right)$
A) $\dfrac{\sqrt{3}}{3}$ B) $3\sqrt{3}$ C) $\sqrt{3}$ D) 1

319. Hisoblang: $\left(\dfrac{\sqrt{7}+\sqrt{5}}{\sqrt{3}+1}\cdot\dfrac{\sqrt{7}-\sqrt{5}}{\sqrt{3}-1}\right):\left(\dfrac{1}{\sqrt{3}}-\dfrac{\sqrt{3}}{9}+\dfrac{1}{\sqrt{27}}\right)$
A) $\dfrac{\sqrt{3}}{3}$ B) $3\sqrt{3}$ C) $\sqrt{3}$ D) 1

320. Hisoblang: $\left(\dfrac{\sqrt{10}+\sqrt{7}}{\sqrt{5}+1}\cdot\dfrac{\sqrt{10}-\sqrt{7}}{\sqrt{5}-1}\right):\left(\dfrac{1}{\sqrt{3}}-\dfrac{\sqrt{3}}{9}+\dfrac{1}{\sqrt{27}}\right)$
A) $\dfrac{\sqrt{3}}{4}$ B) $3\sqrt{3}$ C) $\sqrt{3}$ D) 1

321. Hisoblang: $\left(\dfrac{\sqrt{5}+\sqrt{3}}{\sqrt{7}+3}\cdot\dfrac{\sqrt{5}-\sqrt{3}}{\sqrt{7}-3}\right):\left(\dfrac{1}{\sqrt{3}}-\dfrac{\sqrt{3}}{9}+\dfrac{1}{\sqrt{27}}\right)$
A) $\dfrac{\sqrt{3}}{3}$ B) $3\sqrt{3}$ C) $\sqrt{3}$ D) 1

322. $f(x)=\begin{cases}4x+1, & x<0\\ -x^3+5, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f\left(2\right)\right)$ ni toping.
A) -11 B) -13 C) -7 D) -3

323. $f(x)=\begin{cases}-x+2, & x<2\\ \dfrac{x-1}{2}, & x\ge 2\end{cases}$ funksiya berilgan. $f\left(f\left(-1\right)\right)$ ni toping.
A) 1 B) 3 C) -1 D) 2

324. $f(x)=\begin{cases}6x+1, & x<0\\ x^2-5, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f\left(2\right)\right)$ ni toping.
A) -5 B) 3 C) -1 D) -2

325. $f(x)=\begin{cases}-x+1, & x<0\\ x^2-4, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f(-4)\right)$ ni toping.
A) 21 B) 5 C) 29 D) 18

326. $f(x)=\begin{cases}-x+1, & x<0\\ -x^2-5, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f(0)\right)$ ni toping.
A) 6 B) 5 C) 4 D) 18

327. $f(x)=\begin{cases}-2x+1, & x<3\\ 2x^2-3, & x\ge 3\end{cases}$ funksiya berilgan. $f\left(f(-1)\right)$ ni toping.
A) 15 B) 5 C) 29 D) 18

328. $f(x)=\begin{cases}3x+4, & x<0\\ x^2+1, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f(0)\right)$ ni toping.
A) 17 B) 15 C) 4 D) 18

329. $f(x)=\begin{cases}-3x-4, & x<0\\ 6x^2+1, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f(-1)\right)$ ni toping.
A) -1 B) 7 C) 5 D) 1

330. $f(x)=\begin{cases}-x+1, & x<0\\ x^2+1, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f(3)\right)$ ni toping.
A) 3 B) 5 C) 9 D) 7

331. $f(x)=\begin{cases}-x+1, & x<0\\ x^2-7, & x\ge 0\end{cases}$ funksiya berilgan. $f\left(f(3)\right)$ ni toping.
A) -3 B) 5 C) -2 D) 6

332. k ning qanday eng kichik natural qiymatida $x^2+(k+2)^2x+2k-4=0$ tenglamaning ildizlari 2 dan kichik bo'ladi?
A) 1 B) 4 C) 2 D) 3

333. k ning qanday eng kichik butun qiymatida $x^2+(k+2)^2x+2k-4=0$ tenglamaning ildizlari 2 dan kichik bo'ladi?
A) -5 B) -4 C) -2 D) -1

334. Hisoblang: $\int_1^2\left(e^x+\frac{1}{x}\right)dx.$
A) $e^2-e+\ln 2$ B) $e^2+e-\ln 2$
C) $e^2+e+\ln 2$ D) $e^2-e-\ln 3$

335. Hisoblang: $\int_1^3\left(e^x+\frac{1}{x}\right)dx.$
A) $e^2-e+\ln 3$ B) $e^2+e-\ln 3$
C) $e^2+e+\ln 3$ D) $e^2-e-\ln 3$

336. Hisoblang: $\int_1^e\left(e^x+\frac{1}{x}\right)dx.$
A) e^2-e+1 B) e^2+e-1
C) e^2+e+1 D) e^2-e-1

337. Hisoblang: $\int_1^4\left(e^x+\frac{1}{x}\right)dx.$
A) $e^2-e+\ln 4$ B) $e^2+e-\ln 4$
C) $e^2+e+\ln 4$ D) $e^2-e-\ln 4$

338. Hisoblang: $\int\frac{3dx}{x\ln 2x}$
A) $3\ln\ln 2x+C$ B) $6\ln\ln 2x+C$
C) $1{,}5\ln\ln 2x+C$ D) $3\ln 2x+C$

339. Hisoblang: $\int\frac{dx}{x\ln 3x}$
A) $\ln\ln 3x+C$ B) $6\ln\ln 2x+C$
C) $1{,}5\ln\ln 2x+C$ D) $3\ln 2x+C$

340. Hisoblang: $\int\frac{2dx}{x\ln 2x}$
A) $2\ln\ln 2x+C$ B) $6\ln\ln 2x+C$
C) $1{,}5\ln\ln 2x+C$ D) $3\ln 2x+C$

341. Hisoblang: $\int\frac{4dx}{x\ln 2x}$
A) $4\ln\ln 2x+C$ B) $6\ln\ln 2x+C$
C) $1{,}5\ln\ln 2x+C$ D) $3\ln 2x+C$

342. Hisoblang: $\int\frac{5dx}{x\ln 2x}$
A) $5\ln\ln 2x+C$ B) $6\ln\ln 2x+C$
C) $1{,}5\ln\ln 2x+C$ D) $3\ln 2x+C$

343. Hisoblang: $\int\frac{dx}{x\ln 2x}$
A) $\ln\ln 2x+C$ B) $6\ln\ln 2x+C$
C) $1{,}5\ln\ln 2x+C$ D) $3\ln 2x+C$

344. $x=1, y=e^{-x}$ *va* $y=e^x$ funksiyalar grafiklari bilan chegaralangan soha yuzini toping.
A) $\frac{(e-1)^2}{e}$ B) $e-1$ C) $\frac{e-1}{e}$ D) $\frac{(e-2)^2}{2}$

345. $y=x^4-4\ln x$ funksiyaning minimum nuqtasini toping.
A) 1 B) 2 C) *mavjud emas* D) $x=0$

346. $x<-2$ funksiyaning minimum nuqtasini toping.
A) 1 B) 2 C) *mavjud emas* D) $x=0$

347. $y=x^3-3\ln x$ funksiyaning minimum nuqtasini toping.
A) 1 B) 2 C) *mavjud emas* D) $x=0$

348. $y=x^2-2\ln x$ funksiyaning minimum nuqtasini toping.
A) 1 B) 2 C) *mavjud emas* D) $x=0$

349. $y=x-\ln x$ funksiyaning minimum nuqtasini toping.
A) 1 B) 2 C) *mavjud emas* D) $x=0$

350. $y=x^2-|2x-4|$ funksiya grafigiga x=3 va x=-3 nuqtalarda o'tkazilgan urinmalarning kesishish nuqtasi absissasini toping.
A) -1 B) 2 C) *mavjud emas* D) $x=0$

351. $y=x^2-|2x-4|$ funksiya grafigiga x=3 va x=-3 nuqtalarda o'tkazilgan urinmalarning kesishish nuqtasi ordinatasini toping.
A) -9 B) 2 C) *mavjud emas* D) $x=0$

352. $y=x^2-|2x-4|$ funksiya grafigiga x=3 va x=-3 nuqtalarda o'tkazilgan urinmalar orasidagi burchakni toping.
A) $arctg\frac{8}{15}$ B) $arctg\frac{12}{5}$ C) *mavjud emas* D) $\frac{\pi}{4}$

353. $y=x^2-|2x-4|$ funksiya grafigiga x=3 va x=-3 nuqtalarda o'tkazilgan urinmalar orasidagi burchak α

bo'lsa, $\cos\alpha$ ni toping.

A) $\frac{15}{17}$ B) $\frac{12}{5}$ C) *mavjud emas* D) $\frac{\pi}{4}$

354. $y=x^2-|2x-4|$ funksiya grafigiga x=3 va x=-3 nuqtalarda o'tkazilgan urinmalar orasidagi burchak α bo'lsa, $\sin\alpha$ ni toping.

A) $\frac{8}{17}$ B) $\frac{12}{5}$ C) *mavjud emas* D) $\frac{\pi}{4}$

355. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a+b|-|b-c|+|a-c|$ ifodani soddalashtiring.
A) -2a B) -2a-2c C) 0 D) b-a

356. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a-b|+|b-c|-|a-c|$ ifodani soddalashtiring.
A) 0 B) -2a-2c C) -2c D) b-a

357. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a+b|-|b+c|+|a-c|$ ifodani soddalashtiring.
A) -2a+2c B) -2a-2c C) 0 D) b-a

358. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a+b|+|b-c|-|a+c|$ ifodani soddalashtiring.
A) -2b+2c B) -2a-2c C) 0 D) b-a

359. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a-b|-|b+c|-|a-c|$ ifodani soddalashtiring.
A) 2b B) -2a-2c C) 0 D) b-a

360. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a-b|-|b-c|-|a-c|$ ifodani soddalashtiring.
A) 2b-2c B) -2a-2c C) 0 D) b-a

361. Agar a, b, c manfiy butun sonlar bo'lib, $\frac{1}{a}>\frac{1}{b}>\frac{1}{c}$ tengsizliklar bajarilsa, $|a+b|+|b+c|-|a+c|$ ifodani soddalashtiring.
A) -2b B) -2a-2c C) 0 D) b-a

362. Agar $a<0,b<0,c>0$ bo'lsa, $\sqrt{b^2}+|b-c|-|c-a|+b$ ifodani soddalashtiring.
A) a-b B) a-2b+c D) –a D) a-2b

363. Agar $a<0,b<0,c>0$ bo'lsa, $\sqrt{b^2}-|b-c|+|c-a|+b$ ifodani soddalashtiring.
A) b-a B) a-2b+c D) –a D) a-2b

364. Agar $a<0,b<0,c>0$ bo'lsa, $\sqrt{b^2}+|b-c|+|c-a|+b$ ifodani soddalashtiring.
A) –a-b+2c B) a-2b+c D) –a D) a-2b

365. Agar $a<0,b<0,c>0$ bo'lsa, $\sqrt{b^2}-|b-c|-|c-a|+a$ ifodani soddalashtiring.
A) 2a-2c B) a-2b+c D) –a D) a-2b

366. Agar $a<0,b<0,c>0$ bo'lsa, $\sqrt{b^2}-|b-c|-|c-a|-b$ ifodani soddalashtiring.
A) a-b-2c B) a-2b+c D) –a D) a-2b

367. Hisoblang: $tg20^0+4\sin 20^0$.

A) $\sqrt{3}$ B) 1 D) $\frac{\sqrt{3}}{3}$ D) 2

368. Hisoblang: $\cos 10^0-2\cos 50^0-\cos 70^0$
A) $-\cos 50^0$ B) $\sin 40^0$ C) $-\sin 50^0$ D) $\cos 50^0$

369. Agar $x\neq 0$ bo'lsa, $5+5^{2x+y}-5^{x+1}-5^{x+y}=0$ tenglikdan foydalanib x ni y orqali ifodalang.
A) x=1-y B) x=-1-y C) x=y-1 D) x=y+1

370. Agar $x\neq 0$ bo'lsa, $3^{x+1}-3-3^{2x+y}-3^{x+y}=0$ tenglikdan foydalanib x ni y orqali ifodalang.
A) x=1-y B) x=-1-y C) x=y-1 D) x=y+1

371. Agar $x\neq 0$ bo'lsa, $7+7^{2x+y}=7^{x+1}+7^{x+y}$ tenglikdan foydalanib x ni y orqali ifodalang.
A) x=1-y B) x=-1-y C) x=y-1 D) x=y+1

G E O M E T R I Y A

1. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=16,DC=4 va AB=AD=10 bo'lsa, ADC uchburchakning yuzini toping.
   A)12 B)14 C)10 D)16
2. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=12,DC=4 va AB=AD=10 bo'lsa, ADC uchburchakning yuzini toping.
   A)16 B)14 C)10 D)12
3. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=6,DC=4 va AB=AD=5 bo'lsa, ADC uchburchakning yuzini toping.
   A)8 B)14 C)10 D)16
4. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=8,DC=4 va AB=AD=5 bo'lsa,ADC uchburchakning yuzini toping.
   A)6 B)14 C)10 D)16
5. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=16, DC=4 va AB=AD=17 bo'lsa,ADC uchburchakning yuzini toping.
   A)30 B)28 C)20 D)32
6. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=30,DC=4 va AB=AD=17 bo'lsa,ADC uchburchakning yuzini toping.
   A)16 B)28 C)20 D)32
7. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=10,DC=4 va AB=AD=13 bo'lsa,ADC uchburchakning yuzini toping.
   A)24 B)28 C)20 D)32
8. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=24,DC=4 va AB=AD=13 bo'lsa,ADC uchburchakning yuzini toping.
   A)10 B)14 C)20 D)16
9. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=15,DC=4 va AB=AD=12,5 bo'lsa,ADC uchburchakning yuzini toping.
   A)20 B)28 C)20 D)32
10. ABC uchburchakning BC tomonida D nuqta olingan.Agar BD=20,DC=4 va AB=AD=10 bo'lsa,ADC uchburchakning yuzini toping.
    A)15 B)28 C)20 D)32
11. A(0;1) va B(5;-3) nuqtalar berilgan.Agar B nuqta AC kesmaning o'rtasi bo'lsa, C nuqta koordinatalar yig'indisini toping.
    A)3 B)2,5 C)2 D)4
12. A(4;-1) va B(2;-5) nuqtalar berilgan.Agar B nuqta AC kesmaning o'rtasi bo'lsa, C nuqta koordinatalar yig'indisini toping.
    A)-9 B)-5 C)12 D)-4
13. A(-3;2) va B(2;0) nuqtalar berilgan.Agar B nuqta AC kesmaning o'rtasi bo'lsa, C nuqta koordinatalar yig'indisini toping.
    A)-9 B)-5 C)12 D)-4
14. A(3;-2) va B(0;-2) nuqtalar berilgan.Agar B nuqta AC kesmaning o'rtasi bo'lsa, C nuqta koordinatalar yig'indisini toping.
    A)-5 B)-9 C)12 D)-4
15. A(-8;-3) va B(-2;3) nuqtalar berilgan.Agar B nuqta AC kesmaning o'rtasi bo'lsa, C nuqta koordinatalar yig'indisini toping.
    A)13 B)-5 C)-9 D)-4
16. ABCD trapetsiyaning yuzi 48 ga teng, asoslari DC=6, AB=2. BC tomonidan E nuqta olingan bo'lib, BE=2EC bo'lsa, ADE uchbutchakning yuzini toping.
    A)28 B)18 C)24 D)32
17. ABCD trapetsiyaning yuzi 24 ga teng, asoslari DC=6, AB=2. BC tomonidan E nuqta olingan bo'lib, BE=2EC bo'lsa, ADE uchbutchakning yuzini toping.
    A)14 B)21 C)12 D)16
18. ABCD trapetsiyaning yuzi 36 ga teng, asoslari DC=6, AB=2. BC tomonidan E nuqta olingan bo'lib, BE=2EC bo'lsa, ADE uchbutchakning yuzini toping.
    A)21 B)14 C)12 D)16
19. ABCD trapetsiyaning yuzi 12 ga teng, asoslari DC=6, AB=2. BC tomonidan E nuqta olingan bo'lib, BE=2EC bo'lsa, ADE uchbutchakning yuzini toping.
    A)7 B)21 C)12 D)16
20. ABCD trapetsiyaning yuzi 60 ga teng, asoslari DC=6, AB=2. BC tomonidan E nuqta olingan bo'lib, BE=2EC bo'lsa, ADE uchbutchakning yuzini toping.
    A)35 B)21 C)12 D)16
21. Muntazam ko'pburchakning tomoni unga tashqi chizilgan aylananing 36^0 li yoyni tortib turadi.Muntazam ko'pburchakning tomonlari sonini toping.
    A)10 B)12 C)6 D)8
22. Muntazam ko'pburchakning tomoni unga tashqi chizilgan aylananing 30^0 li yoyni tortib turadi.Muntazam ko'pburchakning tomonlari sonini toping.
    A)12 B)10 C)6 D)8
23. Muntazam ko'pburchakning tomoni unga tashqi chizilgan aylananing 72^0 li yoyni tortib turadi.Muntazam ko'pburchakning tomonlari sonini toping.
    A)5 B)12 C)6 D)8
24. Muntazam ko'pburchakning tomoni unga tashqi chizilgan aylananing 60^0 li yoyni tortib turadi.Muntazam ko'pburchakning tomonlari sonini toping.
    A)6 B)12 C)16 D)18
25. Muntazam ko'pburchakning tomoni unga tashqi chizilgan aylananing 18^0 li yoyni tortib turadi.Muntazam ko'pburchakning tomonlari sonini toping.
    A)20 B)12 C)10 D)8
26. Muntazam ko'pburchakning tomoni unga tashqi chizilgan aylananing 10^0 li yoyni tortib turadi.Muntazam ko'pburchakning tomonlari sonini toping.
    A)36 B)24 C)26 D)28
27. Markaziy burchagi 72^0 bo'lgan sektorning yuzi 15 ga teng. Sektor radiusini toping.
    A) $\sqrt{\frac{75}{\pi}}$ B) $\sqrt{\frac{45}{\pi}}$ C) $\sqrt{\frac{15}{\pi}}$ D) $\sqrt{\frac{25}{\pi}}$

28. Markaziy burchagi 36^0 bo'lgan sektorning yuzi 15 ga teng. Sektor radiusini toping.
A) $\sqrt{\frac{150}{\pi}}$ B) $\sqrt{\frac{45}{\pi}}$ C) $\sqrt{\frac{15}{\pi}}$ D) $\sqrt{\frac{25}{\pi}}$

29. Markaziy burchagi 120^0 bo'lgan sektorning yuzi 15 ga teng. Sektor radiusini toping.
A) $\sqrt{\frac{45}{\pi}}$ B) $\sqrt{\frac{75}{\pi}}$ C) $\sqrt{\frac{15}{\pi}}$ D) $\sqrt{\frac{25}{\pi}}$

30. Markaziy burchagi 60^0 bo'lgan sektorning yuzi 15 ga teng. Sektor radiusini toping.
A) $\sqrt{\frac{90}{\pi}}$ B) $\sqrt{\frac{45}{\pi}}$ C) $\sqrt{\frac{60}{\pi}}$ D) $\sqrt{\frac{25}{\pi}}$

31. Markaziy burchagi 90^0 bo'lgan sektorning yuzi 15 ga teng. Sektor radiusini toping.
A) $\sqrt{\frac{60}{\pi}}$ B) $\sqrt{\frac{75}{\pi}}$ C) $\sqrt{\frac{90}{\pi}}$ D) $\sqrt{\frac{48}{\pi}}$

32. To'gri burchakli uchburchakka ichki va tashqi chizilgan aylana radiuslari uzunliklari yig'indisi 4 ga, gipotenuzasi esa 6 ga teng. Uchburchakning peremetrini toping.
A)14 B)12 C)18 D)20

33. To'gri burchakli uchburchakka ichki va tashqi chizilgan aylana radiuslari uzunliklari yig'indisi 5 ga, gipotenuzasi esa 8 ga teng. Uchburchakning peremetrini toping.
A)18 B)12 C)20 D)14

34. To'gri burchakli uchburchakka ichki va tashqi chizilgan aylana radiuslari uzunliklari yig'indisi 7 ga, gipotenuzasi esa 10 ga teng. Uchburchakning peremetrini toping.
A)24 B)12 C)14 D)20

35. To'gri burchakli uchburchakka ichki va tashqi chizilgan aylana radiuslari uzunliklari yig'indisi 3,5 ga, gipotenuzasi esa 5 ga teng. Uchburchakning peremetrini toping.
A)12 B)14 C)18 D)20

36. To'gri burchakli uchburchakka ichki va tashqi chizilgan aylana radiuslari uzunliklari yig'indisi 17 ga, gipotenuzasi esa 26 ga teng. Uchburchakning peremetrini toping.
A)60 B)72 C)58 D)50

37. ABCD to'rtburchak aylanaga ichki chizilgan, Agar <ABC = 105^0, <CAD = 35^0 bo'lsa, <ABD ni toping.
A) 70^0 B) 60^0 C) 75^0 D) 80^0

38. ABCD to'rtburchak aylanaga ichki chizilgan, Agar <ABC = 105^0, <CAD = 45^0 bo'lsa, <ABD ni toping
A) 60^0 B) 70^0 C) 75^0 D) 80^0

39. ABCD to'rtburchak aylanaga ichki chizilgan, Agar <ABC = 105^0, <CAD = 30^0 bo'lsa, <ABD ni toping.
A) 75^0 B) 60^0 C) 70^0 D) 80^0

40. ABCD to'rtburchak aylanaga ichki chizilgan, Agar <ABC = 105^0, <CAD = 25^0 bo'lsa, <ABD ni toping.
A) 80^0 B) 60^0 C) 75^0 D) 70^0

41. ABCD to'rtburchak aylanaga ichki chizilgan, Agar <ABC = 105^0, <CAD = 55^0 bo'lsa, <ABD ni toping.
A) 50^0 B) 60^0 C) 75^0 D) 80^0

42. To'gri burchakli ABCD trapetsiyaning B va C burchaklari to'gri. AB = 3, BC = 6 va DC = 4. Trapetsiyaning D uchidan AC diogonaligacha bo'lgan masofani toping.
A)2,4 B)3 C)3,6 D)2

43. To'gri burchakli ABCD trapetsiyaning B va C burchaklari to'gri. AB = 4, BC = 3 va DC = 2. Trapetsiyaning D uchidan AC diogonaligacha bo'lgan masofani toping.
A)1,2 B)3 C)2,4 D)2

44. To'gri burchakli ABCD trapetsiyaning B va C burchaklari to'gri. AB=12, BC = 5 va DC= 6. Trapetsiyaning D uchidan AC diogonaligacha bo'lgan masofani toping.
A) $2\frac{4}{13}$ B)3 C)2.5 D)2

45. ABC uchburchak uchlarining koordinatalari berilgan: A(8;12), B(-8;0) va C(-2;8). Uchburchak CM medianasi yotgan to'gri chiziq tenglamasini tuzing.
A) x + y = 6 B)x +y +6 = 0 C)x + 2y + 3 = 0 D)x – y – 6 = 0

46. ABC uchburchak uchlarining koordinatalari berilgan: A(6;-8), B(4;6) va C(-1;2). Uchburchak CM medianasi yotgan to'gri chiziq tenglamasini tuzing.
A) x + 2y = 3 B)x +y +6 = 0 C)x + 2y + 3 = 0 D)x – y – 6 = 0

47. ABC uchburchak uchlarining koordinatalari berilgan: A(-6;8), B(10;0) va C(-3;6). Uchburchak CM medianasi yotgan to'gri chiziq tenglamasini tuzing.
A) 2x + 5y = 24 B)2x +5y +24 = 0 C)2x -5y + 24 = 0 D)2x – 5y – 24 = 0

48. ABC uchburchak uchlarining koordinatalari berilgan: A(10;4), B(6;4) va C(-5;0). Uchburchak CM medianasi yotgan to'gri chiziq tenglamasini tuzing.
A) 4x + 13y +20 =0 B)4x +13y -20 = 0 C)4x -13y - 20 = 0 D)4x – 13y + 20 = 0

49. ABCD parallelogramning dioganallari O nuqtada kesishadi. $\overrightarrow{AC} = k\overrightarrow{AO}$ tenglik bajariladigan k soning qiymatinini toping.
A)2 B)3 C)1,5 D)2,5

50. $\vec{a}$ va $\vec{b}$ nolmas vektorlarining kolinearlik alomati berilgan javob-bu
A) $\vec{a} = k\vec{b}, k \neq 0$ B) $\vec{a} \cdot \vec{b} = 0$ C) $\vec{c} = x\vec{a} + y\vec{b} = 0$
D) $\vec{c} = x\vec{a} - y\overrightarrow{b=0}$

51. $\vec{a}$ va $\vec{b}$ birlik vektorlarga qurilgan parallelogramning dioganallari orasidagi burchakni toping.
A) 90^0 B) 60^0 C) 30^0 D) 45^0

52. ABC uchburchakda D va E nuqtalar BC tomonni uchta teng qismlarga bo'ladi.(BD=DE=EC), F va G nuqtalar esa AD kesmani 3 ta teng qismlarga bo'ladi(AF=FG=GD). AFE uchburchakning yuzining ABC uchburchak yuziga nisbatini toping.
A)1/9 B)1/3 C)1/4 D)1/12

53. ABC uchburchakda D nuqta BC tomonni ikkita teng qismlarga bo'ladi.(BD=DC), E nuqta esa AC kesmani 2 ta teng qismlarga bo'ladi(AE=ED). ACE

uchburchakning yuzining ABC uchburchak yuziga nisbatini toping.

A)1/4 B)1/3 C)1/9 D)1/12

54. ABC uchburchakda D nuqta BC tomonni ikkita teng qismlarga bo'ladi.(BD=DC), E nuqta esa AC kesmani 2 ta teng qismlarga bo'ladi(AE=ED). F nuqta esa EC kesmani ikkita teng qismlarga bo'ladi(FE=EC). AFE uchburchakning yuzining ABC uchburchak yuziga nisbatini toping.

A)1/8 B)1/3 C)1/9 D)1/12

55. ABCDEF muntazam oltiburchakda AC, CE, BF,FD dioganallar o'tkazilgan.AC va BF dioganallar L nuqtada , CE va FD dioganallar K nuqtada kesishadi. Agar oltiburchak tomoni $2\sqrt{3}$ ga teng bo'lsa, LCKF turtburchakni yuzini toping.

A)8 $\sqrt{3}$ B)5 $\sqrt{3}$ C)9 $\sqrt{3}$ D)6 $\sqrt{3}$

56. ABCDEF muntazam oltiburchakda AC, CE, BF,FD dioganallar o'tkazilgan.AC va BF dioganallar L nuqtada , CE va FD dioganallar K nuqtada kesishadi. Agar oltiburchak tomoni $2\sqrt{3}$ ga teng bo'lsa, CKF uchburchaknini yuzini toping.

A)4 $\sqrt{3}$ B)5 $\sqrt{3}$ C)9 $\sqrt{3}$ D)6 $\sqrt{3}$

57. ABCDEF muntazam oltiburchakda AC, CE, BF,FD dioganallar o'tkazilgan.AC va BF dioganallar L nuqtada , CE va FD dioganallar K nuqtada kesishadi. Agar oltiburchak tomoni $2\sqrt{3}$ ga teng bo'lsa, LCK turtburchakni yuzini toping.

A)4 $\sqrt{3}$ B)5 $\sqrt{3}$ C)9 $\sqrt{3}$ D)6 $\sqrt{3}$

58. ABCDEF muntazam oltiburchakda AC, CE, BF,FD dioganallar o'tkazilgan.AC va BF dioganallar L nuqtada , CE va FD dioganallar K nuqtada kesishadi. Agar oltiburchak tomoni $2\sqrt{3}$ ga teng bo'lsa, LK dioganal uzunligini toping.

A)4 B)5 C)9 D)6

59. A(3;0) va B(-1;2) nuqtalardan o'tuvchi hamda markazi y= x +2 to'gri chiziqda yotgan aylana tenglamasini toping.

A) $(x-3)^2+(y+5)^2=25$

B) $(x-4)^2+(y-5)^2=25$

C) $(x-3)^2+(y-4)^2=25$

D) $(x-5)^2+(y-3)^2=25$

60. ABC to'gri burchakli uchburchakning katetlari AB = 4, AC=6 va AN bissektrisa bolsa, ABN uchburchakning yuzini toping.

A)4.8 B)3 C)4 D)4,2

61. ABC to'gri burchakli uchburchakning katetlari AB = 4, AC=6 va AN bissektrisa bolsa, ACN uchburchakning yuzini toping.

A)7,2 B)6,3 C)4,8 D)4,2

62. ABC to'gri burchakli uchburchakning katetlari AB = 10, AC=15 va AN bissektrisa bolsa, ACN uchburchakning yuzini toping.

A)45 B)30 C)48 D)45

63. ABC to'gri burchakli uchburchakning katetlari AB = 10, AC=6 va AN bissektrisa bolsa, ABN uchburchakning yuzini toping.

A)30 B)48 C)42 D)45

64. ABC to'gri burchakli uchburchakning katetlari AB = 8, AC=12 va AN bissektrisa bolsa,ACN uchburchakning yuzini toping.

A)28,8 B)26.4 C)19,2 D)24,2

65. ABC to'gri burchakli uchburchakning katetlari AB = 8, AC=12 va AN bissektrisa bolsa,ABN uchburchakning yuzini toping.

A)19.2 B)26.4 C)28.8 D)24,2

66. Uchburchakning 10 ga teng balandligi uning asosini 10 va 4 ga teng kesmalarga ajratadi. Uchburchakning qolgan ikki tomonidan kichigiga o'tkazilgan mediana uzunligini toping.

A)13 B)14 C)11 D)12

67. Uchburchakning 6 va 8 ga teng medianalari o'zaro 90^0 burchak ostida kesishadi. Uchburchakning uchinchi tomoniga o'tkazilgan mediana uzunligini toping.

A)10 B)5 C)15 D)20

68. Uchburchakning 5 va 12 ga teng medianalari o'zaro 90^0 burchak ostida kesishadi. Uchburchakning uchinchi tomoniga o'tkazilgan mediana uzunligini toping.

A)13 B)5 C)15 D)20

69. Uchburchakning 15 va 8 ga teng medianalari o'zaro 90^0 burchak ostida kesishadi. Uchburchakning uchinchi tomoniga o'tkazilgan mediana uzunligini toping.

A)17 B)25 C)15 D)20

70. Uchburchakning 3 va 4 ga teng medianalari o'zaro 90^0 burchak ostida kesishadi. Uchburchakning uchinchi tomoniga o'tkazilgan mediana uzunligini toping.

A)5 B)10 C)15 D)20

71. ABC to'gri burchakli uchburchakda E nuqta BC tomonini BE:EC = 3:1 kabi nisbatda bo'ladi. D nuqta esa AB gipotenuzada yotadi. Agar BD =8, AC=12 va <BAC= 60^0 bo'lsa, BDE uchburchak yuzini toping.

A)18 $\sqrt{3}$ B)48 C)36 D)24 $\sqrt{3}$

72. Piramidaning tomonlari 5, 12, 13 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli burchaklari 60^0 ga teng bo'lsa, uning hajmini toping.

A)20 $\sqrt{3}$ B)48 $\sqrt{3}$ C)36 $\sqrt{3}$ D)24 $\sqrt{3}$

73. Piramidaning tomonlari 13, 14, 15 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli burchaklari 60^0 ga teng bo'lsa, uning hajmini toping.

A)112 $\sqrt{3}$ B)100 $\sqrt{3}$ C)84 $\sqrt{3}$ D)121 $\sqrt{3}$

74. Piramidaning tomonlari 3, 5, 6 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli burchaklari 45^0 ga teng bo'lsa, uning hajmini toping.

A)8/3 B)3 C)10/3 D)4

75. Piramidaning tomonlari 9, 40, 41 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli burchaklari 45^0 ga teng bo'lsa, uning hajmini toping.

A)240 B)220 C)180 D)192

76. Piramidaning tomonlari 4, 5, 6 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli

burchaklari 45^0 ga teng bo'lsa, uning hajmini toping.
A)10 B)40 C)20 D)30

77. Piramidaning tomonlari 3, 6, 8 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli burchaklari 45^0 ga teng bo'lsa, uning hajmini toping.
A)12 B)32 C)20 D)30

78. Piramidaning tomonlari 8, 10, 12 ga teng bo'lgan uchburchakdan iborat. Piramidaning barcha ikki yoqli burchaklari 45^0 ga teng bo'lsa, uning hajmini toping.
A)80 B)90 C)120 D)150

79. Asoslarining radiuslari $2\sqrt{2}$ va $11\sqrt{2}$ ga teng bo'lgan kesik konus va unga tengdosh silingrning balandliklari ham o'zaro teng bo'lsa , silindr asosining radiusini toping.
A)7 $\sqrt{2}$ B)6 $\sqrt{2}$ C)10 $\sqrt{2}$ D)8 $\sqrt{2}$

80. Asoslarining radiuslari $6\sqrt{3}$ va $12\sqrt{3}$ ga teng bo'lgan kesik konuso'rta kesim yuzini toping.
A)243π B)225π C)300π D)512π

81. Qirralari soni 60 ga teng bo'lgan prizmaning nechta yog'I bor?
A)22 B)24 C)21 D)20

82. Qirralari soni 30 ga teng bo'lgan prizmaning nechta yog'I bor?
A)12 B)10 C)14 D)11

83. Qirralari soni 45 ga teng bo'lgan prizmaning nechta yog'I bor?
A)17 B)15 C)14 D)16

84. Konusning balandligi 24 ga o'q kesimining yuzi 72 ga teng. Uning hajmini toping.
A)800π B)400π C)360π D)720π

85. Konusning balandligi 24 ga o'q kesimining peremetri 72 ga teng. Konus asosining markazidan yon sirtigacha bo'lgan masofani toping.
A)60/13 B)120/13 C)50/13 D)22/13

86. Konus balandligi 6 ga ,o'q kesimining peremetri 36 ga teng. Uning hajmini toping.
A)128π B)200π C)256π D)125π

87. Konusning balandligi 24 ga o'q kesimining yuzi 36 ga teng. Konus asosining markazidan yon sirtigacha bo'lgan masofani toping
A)4,8 B)5,2 C)9,6 D)6,4

88. Kubga ichki va tashqi chizilgan sharlar radiuslar nisbatini toping
A) $\sqrt{3}$**/3** B) $\sqrt{3}$/2 C) $\sqrt{3}$/9 D)1/2

89. Tomoni 2 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) $\sqrt{3}$**-1** B) $\sqrt{3}$-2 C)($\sqrt{3}$-1)/2 D)1

90. Tomoni 4 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 2($\sqrt{3}$ **-1)** B) 2 $\sqrt{3}$ -4 C) $\sqrt{3}$ -1 D)2

91. Tomoni 6 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 3($\sqrt{3}$ **-1)** B)3 $\sqrt{3}$ -6 C) 3 $\sqrt{3}$ -1 D)3

92. Tomoni 10 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 5($\sqrt{3}$ **-1)** B) 5 $\sqrt{3}$ -10 C) 5 $\sqrt{3}$ -1 D)5

93. Tomoni 20 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 10($\sqrt{3}$ **-1)** B)10 $\sqrt{3}$ -20 C)10 $\sqrt{3}$ -1 D)10

94. Hajmi 125 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 2,5($\sqrt{3}$ **-1)** B) 2,5 $\sqrt{3}$ -5 C) 2,5 $\sqrt{3}$ -1 D)2,5

95. Hajmi 512 ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 4($\sqrt{3}$ **-1)** B) 4 $\sqrt{3}$ -8 C)4 $\sqrt{3}$ -1 D)4

96. Dioganali $14\sqrt{3}$ ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 7($\sqrt{3}$ **-1)** B) 7 $\sqrt{3}$ -14 C)7 $\sqrt{3}$ -1) D)7

97. Dioganali $16\sqrt{3}$ ga teng kubning biror uchidan unga ichki chizilgan shargacha bo'lgan masofani toping.
A) 8($\sqrt{3}$ **-1)** B) 8 $\sqrt{3}$ -16 C)8 $\sqrt{3}$ -1) D)8

98. Radiusi 10 ga teng yarim sharga asosining markazi bilan ustma-ust tushadigan konus tashqi chizilgan.Konusning balandligi qanday bo'lganda uning hajmi eng kichik bo'ladI?

Informatika

1. Uzunligi 32 bitdan kam bo'lmagan ma'lumotni haqiqiy tipi qaysi so'z orqali ifodalanadi.
A) double B) [log] C) log D) shoint
2. Qaysi so'z yordamida shartli aperator kiritiladi.
A)*if B)throw C)public D) for
3. goto operatori boshqaruvni nimaga beradi?
A)*nishonga (metkaga) B)o'zgaruvchiga
C) Funksiyaga D) satrga
4. Faqat rost mulohazalarni aniqlang va ularga tenglashtirilgan sonlar yig'indisini rim sanoq sistemasida hisoblang.
CLXXXVII= "informatikani odatda, Hardware va Software kabi ikk qismning belgisi sifatida qaraladi" VCIII= "Software- bu informatikaning qismi bo'lib , dasturiy vositalar sifatida qaraladi" IV="Informatikani odatda, Hardware va Programware kabi ikki qismning birligi sifatida qaraladi"
A)*CCLXXXV B)CXX C)CXVII D)CXIX
5. Ali sakkizlik sanoq sistemasida (73;100) oraliqdagi barcha butun sonlarni yozib chiqdi. Vali esa shu sonlardan avval 5 raqami, so'ng 6 raqami qatnashgan barcha sonlarni oi'chirib tashladi. Qolgan sonlar yig'indisini sakkizlik sanoq sistemasida aniqlang va 13 li k sanoq sistemasiga o'tkazing.
A)*96 B)65 C)73 D)89
6. A="Boot record – buyruq protsessoridir" B="Freware – mutlaqo bepul birlamchi kodi ochiq darsturiy ta'minotdir" C="Paradox – operatsion sistemadir" shu mulohazalar asosida quyidagi mantiqiy ifodaning natijasini toping.
C or not (B or not A)
A)* yolg'on B)rost C) ifodada xatolik bor
D) Ba'zi mulohazalarning qiymatini aniqlab bo'lmaydi.
7. A1=7, B1=8, B2=4 bo'lsin. Quyidagi formula natijasi -23 ga teng bo'lishi uchun A2 katakka kiritishi kerak bo'lgan qiymatni aniqlang. =ЕСЛИ(ИЛИ(A1+B2<A2*B1;A1*B1>0); A1*B2+B1-A2;A1*B1+B2+A2)
A)*3 B)0 C) 1D)5
8. Quyidagi HTML hujjat kodi yozilishi bo'yicha kataklar ketma – ket sanalganda nechchanchi katakda og'ma shirftli markerlangan ro'yxat qo'llanilgan <table><tr><ld colspan=2>   test </td rowspan=2>   test </td> <tr><td> test </td> <td> <seti> test </ceti> </td> </table>
A)Birinchi katakda B)to'rtinchi katakda
C) 3 chi D) 2 –chi
9. 10 lik sanoq sistemasidagi juft sonlar barcha sanoq sistemalarida juftligini etiborga olib [DDA;1003] oraliqdagi barcha juft sonlar yig'indisini toping. (barcha sonlar 14 lik sanoq sistemasida qaraladi)
A)3DDA B)3DDDA C)3DDD D)3DAA
10. rost mulohazalarga most sonlar yig'indisini rim sanoq sistemasida aniqlang. CLX – "Soat millarining harakati uzlukli axborotga misol bo'ladi" XCVII – "Insonga uzluksiz ta'sir etib turuvchi axborotlar diskret, axborotlar deb ataladi." XLIX – axborot xususiayatlariga quyidagilar kiradi, qimmatlilik, ishonchlilik, to'liqlik.
A)CLVIII B)CCVI C)CCLV D) CXLV
11. 8 lik sanoq sistemasidagi (57;72) oraliqdagi barcha butun sonlarni yozib chiqib keyin esa shu sonlardan 6 raqami qatnashgan barcha sonlarni o'chirib tashlang qolgan sonlar yig'indisini 8 lik sanoq sistemasida aniqlang va ikkilik sanoq sistemasiga o'tkazing.
A)*1110001 B)10000010 C)10000111 D)1011000
12. A= "MSDOS.SYS" – operatsion sistemani faollashtiruvchi dasturdir. B="Biror nomga ega bo'lgan kompyuter tashqi xotirasida joylashgan baytlar majmuiga katalog deyiladi" C= "BRAINWARE"-algoritmlarni ishlab chiqish ularni tuzish usul va uslublarini o'rganish bilan bog'liq yo'nalishdir'' shu mulohazalar asosida quyidagi mantiqiy ifodaning natijasini toping.
C V – (inkor belgisi) (A^B)=
A)yolg'on
B) bazi mulohazalarni qiymatini aniqlab bo'lmaydi
C) rost D) ifodada xatolik bor
13. A1=7, B1=8, B2=4 bo'lsin. Quyidagi formula natijasi -23 ga teng bo'lishi uchun A2 katakka kiritishi kerak bo'lgan qiymatni aniqlang. =ЕСЛИ(ИЛИ(A1+B2<=A2*B1;A1*B1>0); A1*B2+B1+A2; A1*B1+B2+A2)
A)*3 B)0 C) 1D)5
14. Quyidagi HTML hujjat kodi yozilishi bo'yicha kataklar ketma – ket sanalganda birinchi katakda qanday shirftdagi ro'yxat qo'llanilgan <table><tr><td> <citi> <u> test </u> </citi> </td> <td colspan=3>   test </td> </tr> <tr><td colspan=2>   test </td> <td> <u> test </u> </td> <td>   test </td> </tr> </table>
A)og'ma shriftli markerlangan ro'yxat
B)tak chiziqli shirftlangan markerlangan ro'yxat
C) qalin og'ma shirftli tartiblangan ro'yxat
D) tag chiziqli va og'ma shirftli tartiblangan ro'yxat
15. Paskal tilida quyidagi dastur lavhasi bajarilgacha b o'zgaruvchining qiymatini aniqlang, X:=1; y:=-1; a:=b if (x*x+y>0). End (a:=1/10) THEN b:=trunk else b:=falce;
A) folce B) C) D)
16. Faqat rost mulohazalarni aniqlang va ularga tenglashtirlgan sonlar yig'indisini rim sanoq sistemasida hisoblang.
CLXXXVII= "informatikani odatda, Hardware va Software kabi ikk qismning belgisi sifatida qaraladi" VCIII= "Software- bu informatikaning qismi bo'lib , dasturiy vositalar sifatida qaraladi" IV="Informatikani odatda, Hardware va Programware

kabi ikki qismning birligi sifatida qaraladi”
A)*CCLXXXV B)CXX C)CXVII D)CXIX

17. Ali sakkizlik sanoq sistemasida (57;72) oraliqdagi barcha butun sonlarni yozib chiqdi. Vali esa 6 raqami qatnashgan barcha sonlarni oi’chirib tashladi. Qolgan sonlar yig’indisini sakkizlik sanoq sistemasida aniqlang va 2 li k sanoq sistemasiga o’tkazing.
A)*1110001 B)10000010 C)10000111 D)10110000
18. Informatika o’rganadigan asosiy ashyoni aniqlang.
A)*Algoritm B) C)kompyuter D)axborot
19. MS Excell A1=5; A2=4; A3=6; B1=4; B2=-7; B3=2 bo’lsa = ?(A1:B3; “ >4”)*?? (A1;B3) formulaning natijasi 75 bo’lishi uchun ? va ?? belgilarining o’rniga qo’yish mumkin bo’lga funksiyalar to’’gri berilgan javobni aniqlang.
A)счётесли степень B) C) D)
20. Quyidagi HTML proofe kodi yozilishi bo’yicha kataklar ketma – ket sanalganda nechchanchi katakda tag chiziqli va og’ma shirft qo’llanilgan <Table><tr> <td colspan=2>   test </td> <td rowspan=2> <a> ^{ test <I>} </u> </td> </tr> <tr> <td> <citi> <a> <img: src=test.jpg > test </u> </citi></td> <td> <dt> _{<dd> test} </dt> </td> </tr> <table>.
A)3 chi kataka B) 2 chi katakda C) 1 chi katakda D) to’rtinchi katakda
21. Paskal dastur natijasini aniqlang. Var N, K: integer; S:=string; begin Randomize; S:= ‘DTM = 2017’; n:= random(1)+2; S:=s[n]+s[1]; Insert(’01.08’,s=2); Random(1)+5; Write(s[k]); readln; end.
A)0 B)1 C)natijani aniqlab bo’lmaydi D)8
22. Sonlar alifbosiga kiritilgan belgilar ….. va ular yordamida hosil qilingan boshqa belgilar ….
A) birlik, o’nlik **B)*** raqamlar sonlar C) raqamlar o’nlik D) 100 lik sonlar
23. 77 soni rim raqa,I yordamida qanday ko’rinishda bo’ladi?
A)LXXVII B) C) D)
24. Mantiqiy ko’paytirish amali qaysi belgi orqali belgilanadi.
A)*^ B) C) D)
25. I belgisining 10 likdagi kodini aniqlang
A)* 73 B) C) D)
26. Z belgisining 10 likdagi kodini aniqlang
A)90 B) C) D)
27. Matn kompyuterning 0.25 kb xotirasini egallaydi masku matnda qancha bilgi (simvol) mavjud
A)*256 B) C) D)
28. Diskka 1024 Kb axborot yozilgan shu ma’lumot necha Mg bayt dan iborat bo’ladi
A)1 B) C) D)
29. Diskka 24 bayt axborot yozilgan shu ma’lumot necha bit bo’ladi?
A) 192 B) C) D)
30. Axborot hajmini o’lchash uchun qabul qilingan birlik.
A) 1 bit B) C) D)
31. Informatika so’zi necha bitdan iborat
A)88 B) C) D)
32. Grafik fayllar bilan ishlash paytida ranglar soni 65536 dan 256 gacha kamaysa fayl hajmi qanchaga o’zgaradi?
A)*6 B) C) D)
33. **bir shartli bosma varag’ining hajmi 32 kb (1 belgi 8 bit joy oladi), nashr qilish tezligi sekundiga 64 belgi qog’oz almashtirishni hisobga olmagan holda bitta gazeata matnini (ikki shartli bosma varaq) matritsali printrda nashr qilishga ketadigan vaqt (minutlarda yaxlitlanganda)**
A)256 B)9 C)17 D)12
34. 2,8,10,16 asosli sanoq sistemalari berilgan 100 ko’rinishdagi yozuv
A)hammasida bor B)ikkilikda yo’q C) 10 likda yo’q D) 8 likda yo’q
35. **640 Kb li faylda saqlash mumkin bo’lgan kitob belgilarini eng katta soni “bir betida har biri 64 belgili 32 satr bo’lsa”**
A) 320 B) 640C) 160 D)540
36. 1110010100111100011111011110010101111101 xabarda baytlarda kodlangan turli belgilar soni
A)5 B) C) D)

A) B) C) D)