Turli

1. Agar $ab + bc = ac$ va $a^2 + b^2 + c^2 = 4$ bo'lsa, $|a - b + c|$ ni toping.

A) 2 B) 3 C) 1 D) 0

2. Agar $xy = a^2$ bo'lsa, $\frac{x(y-a)^2 - y(x-a)^2}{x(y-a) - y(x-a)}$ ni hisoblang.

A) 0 B) 1,5 C) 1 D) 3

3. Agar $a + x = y$ bo'lsa, $(a^2 - y^2 - x^2 + 2xy) : \frac{a+y-x}{a+y+x}$ ni hisoblang.

A) 0 B) 1,5 C) 1 D) 3

4. $\frac{(a-3)^2}{a}$ ifoda natural qiymat qabul qiladigan barcha natural a larni toping.

A) 1va9 B) 2va3 C) 1 D) 9

5. $\frac{(a-3)^2}{a}$ ifoda natural qiymat qabul qiladigan barcha natural a lar yig'indisini toping.

A) 10 B) 20 C) 11 D) 9

6. $\frac{2x-y}{x(x-y)} - \frac{y}{x(x-y)}$ ifodaning aniqlanish sohasini toping.

A) $\{(x,y)/x \in R, y \in R, x \neq 0, x \neq y\}$

B) $\{(x,y)/x \in R, y \in Q, x \neq 0, x \neq y\}$

C) $\{(x,y)/x \in R, y \in R, x \neq y\}$

D) $\{(x,y)/x \in N, y \in R, x \neq 0, x \neq y\}$

A) $\frac{x-2m}{x+2m}$ B) 2 C) $\frac{x+2m}{x-2m}$ D) 1

8. $x < 0$ da $|x - |x - 7|| - 7$ ni soddalshtiring.

A) $-2x$ B) $2x$ C) $-x$ D) $x - 2$

9. $x < 0$ da $|x - |x - 9|| - 9$ ni soddalshtiring.

A) $-2x$ B) $2x$ C) $-x$ D) $x - 2$

10. $x < 0$ da $|x - |x - 8|| - 8$ ni soddalshtiring.

A) $-2x$ B) $2x$ C) $-x$ D) $x - 2$

11. $x < 0$ da $|x - |x - 5|| - 5$ ni soddalshtiring.

A) $-2x$ B) $2x$ C) $-x$ D) $x - 2$

12. $x < 0$ da $|x - |x - 10|| - 10$ ni soddalshtiring.

A) $-2x$ B) $2x$ C) $-x$ D) $x - 2$

13. $\sqrt{x+2} + |x - 4| \leq 6$ tengsizlikning butun yechimlari yig'indisini toping.

A) 25 B) 20 C) 12 D) 35

14. $\sqrt{x+1} + |x - 4| \leq 6$ tengsizlikning butun yechimlari yig'indisini toping.

A) 18 B) 20 C) 12 D) 25

15. $\sqrt{x+2} + |x - 2| \leq 4$ tengsizlikning butun yechimlari yig'indisini toping.

A) 3 B) 5 C) 6 D) 2

16. $\frac{|x+3|+x}{x+2} > 1$ tengsizlikning butun manfiy yechimlari nechta?

A) 2 B) 1 C) 3 D) 0

17. $\frac{|x+2|+x}{x+1} > 1$ tengsizlikning butun manfiy yechimlari nechta?

A) 1 B) 2 C) 3 D) 0

18. $\frac{|x+4|+x}{x+3} > 1$ tengsizlikning butun manfiy yechimlari nechta?

A) 3 B) 1 C) 2 D) 0

19. $\frac{|x+4|+x}{x+3} \geq 1$ tengsizlikning butun manfiy yechimlari nechta?

A) 4 B) 1 C) 3 D) 0

20. $\frac{|x+2|+x}{x+1} \geq 1$ tengsizlikning butun manfiy yechimlari nechta?

A) 2 B) 1 C) 3 D) 0

21. Agar $\frac{mn}{n^2+12m^2} = \frac{1}{7}$ bo'lsa, $\frac{3mn}{2n^2-5m^2}$ ni hisoblang.

A) $\frac{9}{4}$ B) $\frac{4}{9}$ yoki $\frac{9}{4}$ C) $\frac{4}{9}$ D) $\frac{9}{4}$

22. $x^2 > 17$ tengsizlikning eng kata manfiy va eng kichik musbat butun qiymatlari ko'paytmasini toping.

A) -25 B) -16 C) -36 D) 25

23. $x^2 < 31$ tengsizlikning nechta butun yechimi bor?.

A) 11 B) 10 C) 9 D) 12

24. $\frac{x^2+x-30}{|x-5|+1} \leq 0$ tengsizlikning natural sonlardan iborat yechimlari yig'indisini toping.

A) 15 B) 10 C) 21 D) 12

25. $\frac{x^2+x-42}{|x-5|+1} \leq 0$ tengsizlikning natural sonlardan iborat yechimlari yig'indisini toping.

A) 15 B) 10 C) **11** D) 12

26. $\frac{x^2+x-20}{|x-3|+1} \leq 0$ tengsizlikning natural sonlardan iborat yechimlari yig'indisini toping.

A) 15 **B) 10** C) 21 D) 12

27. $\frac{x^2+x-12}{|x-2|+1} \leq 0$ tengsizlikning natural sonlardan iborat yechimlari yig'indisini toping.

A) 15 B) 10 C) 21 **D) 6**

28. $\frac{x^2+x-56}{|x-4|+1} \leq 0$ tengsizlikning natural sonlardan iborat yechimlari yig'indisini toping.

A) 28 B) 10 C) 21 D) 12

29. $2x + 8 \leq x^2 < 6x$ tengsizlikni yeching.

A) $[4; 6)$ B) $(4; 6)$ C) $[2; 6)$ D) $(0; \infty)$

30. $2x + 8 \leq x^2 < 6x$ tengsizlikning butun yechimlari nechta?

A) 2 B) 1 C) 3 D) 0

31. $2x + 8 \leq x^2 < 6x$ tengsizlikning butun yechimlari yig'indisini toping.

A) 9 B) 11 C) 18 D) 4

32. $x^6 - 28x^3 + 27 \leq 0$ tengsizlikni yeching.

A) $[1; 3]$ B) $[1; 27]$ C) $[1; 9]$ D) $[1; 3)$

33. $x^6 - 28x^3 + 27 \leq 0$ tengsizlik nechta butun yechimga ega?

A) 3 B) 1 C) 22 D) 8

34. $x^4 - 13x^2 + 36 \leq 0$ tengsizlik nechta butun yechimga ega?

A) 3 **B) 4** C) 22 D) 8

35. $x^4 - 5x^2 - 36 \leq 0$ tengsizlik nechta butun yechimga ega?

A) 3 **B) 7** C) 22 D) 8

36. $x^4 + 5x^2 - 36 \leq 0$ tengsizlik nechta butun yechimga ega?

A) 3 B) 7 C) 22 D) 8

37. $\frac{\sqrt{8-2x-x^2}}{x+2} \geq 0$ tengsizlikning butun yechimlari nechta?

A) 2 B) 1 C) 3 **D) 5**

38. $\frac{\sqrt{8-2x-x^2}}{x+2} \geq 0$ tengsizlikni yeching.

A) $[1; 3]$ **B)** $(-2; 2] \cup \{-4\}$
C) $[-1; 1] \cup \{-2\}$ D) $[1; 3) \cup \{-4\}$

39. $\frac{1-x}{\sqrt{3+2x-x^2}} \geq 0$ tengsizlikni yeching.

A) $[1; 2]$ B) $(0; 1]$ **C)** $(-1; 1]$ D) $(-1; 3)$

40. $\frac{1-x}{\sqrt{3+2x-x^2}} \geq 0$ tengsizlikning butun yechimlari nechta?

A) 4 B) 1 **C) 2** D) 5

41. $\sqrt{6-x} < x$ tengsizlikni yeching.

A) $[1; 6]$ B) $(0; 3]$ **C)** $(2; 6]$ D) $(0; 6)$

42. $\sqrt{6-x} < x$ tengsizlikning butun yechimlari o'rta arifmetigini toping.

A) 4 B) 3,5 **C) 4,5** D) 5

43. Agar $a < 0$ bo'lsa, $\frac{3}{x} < \frac{1}{a}$ tengsizlikni yeching.

A) $4a < x < 0$ B) $3a < x < 2$
C) $3a < x < 0$ D) $x < a$

A) $x < -1$;
C) $x < 1$;

55. $\log_x 8$

A) (1;2

56. $\sqrt{2x}$
yechim

A) (1;

57. $\sqrt{}$

A) (

58.
ten

A

121. $[2x-1] = x$ tenglamaning yechimlar soni nechta?

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

122. $[2x-1] = x$ tenglamaning yechimlar yig'indisini toping.

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

123. $x^3 - 3x - 2 = 0$, tenglamani yeching.

A) -1;2 B) 1; −1; 2 C) -3;2 D) 1;4

124. $x^3 - 2x - 1 = 0$, tenglama nechta ildizga ega?

A) 1 B) 0 C) 2 **D) 3**

125. $x^3 - 2x - 1 = 0$, tenglama

A) 0 B) 4 C) 2 D) 3

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

A) 0 **B) 3** C) 2 D) 1

127. $x^2 - 3x - 14 + \sqrt{x^2 - 3x + 6} = 0$ tenglamaning ildizlar yig'indisini toping.

A) 7 B) 6 C) 2 **D) 3**

128. $\frac{x-2}{x+3} + \frac{3x+9}{x-2} = -4$ tenglamaning ildizlar yig'indisini toping.

A) -2 B) 4 C) 25 D) 3

129. $x^2 - \sqrt{x^2 - 4x + 4} = -2$, tenglamaning haqiqiy ildizlar sonini toping

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

130. $x^2 - \sqrt{x^2 - 6x + 9} = -3$, tenglamaning haqiqiy ildizlar sonini toping

A) 0 B) 1 C) 4 **D) 2**

131. $x^2 - 10x + 4 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $|\sqrt{x_1} - \sqrt{x_2}|$ ni toping

A) 6 B) $\sqrt{6}$ C) 3 D) $2\sqrt{5}$

132. $x^2 - 11x + 9 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $|\sqrt{x_1} - \sqrt{x_2}|$ ni toping.

A) 0 **B)** $\sqrt{5}$ C) 1 D) $2\sqrt{5}$

133. $x^2 - 11x + 4 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $|\sqrt{x_1} - \sqrt{x_2}|$ ni toping.

A) $\sqrt{7}$ B) $\sqrt{6}$ C) 7 D) $2\sqrt{5}$

134. $x^2 - 13x + 9 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $|\sqrt{x_1} - \sqrt{x_2}|$ ni toping.

A) $\sqrt{2}$ B) $\sqrt{6}$ **C)** $\sqrt{7}$ D) $2\sqrt{5}$

135. $x^2 + 13x + 16 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $|\sqrt{x_1} - \sqrt{x_2}|$ ni toping.

A) $\sqrt{2}$ B) $\sqrt{6}$ C) 7 **D)** $\sqrt{5}$

136. $8 \cdot x^{2-\log_2 x} = 1$ tenglamaning ildizlar ko'paytmasini toping

A) 4 B) 8 C) 2 D) 3

137. $16 \cdot x^{3-\log_2 x} = 1$ tenglamaning ildizlar ko'paytmasini toping

A) 4 **B) 8** C) 2 D) 7

138. $32 \cdot x^{4-\log_2 x} = 1$ tenglamaning ildizlar ko'paytmasini toping

A) 4 B) 8 **C)16** D) 7

139. $\begin{cases} x + y = 5 \\ x + z = 6 \\ xy + xz + yz = 29 \end{cases}$, tenglamalar sistemasini yeching.

A) (4,2;1) **B) (−1, 6; 7)** C) (2,1;5) D) (1;7,6)

140. $\frac{2x+18}{x+3} - \frac{x-3}{3-x} = 5$, tenglamani yeching.

A) 4 B) 8 **C)** 0 D) 3

141. $\frac{x+3}{x-1} = 4 + \frac{x-1}{x}$, tenglamani yeching

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

144. $x^3 - 0.1x = 0.3x^2$, tenglamaning haqiqiy ildizlar yig'indisini toping.

A) 0.7 B) 1 C) 0.4 **D) 0.3**

145. $x^3 - 0.1x = 0.3x^2$, tenglamaning haqiqiy ildizlar ko'paytmasini toping.

A) 0 B) 2 C) 3 D) 8

146. $x^3 - 2x - 1 = 0$,haqiqiy ildizlar ko'paytmasini toping.

A) 4 **B) 1** C) 2 D) 0,3

147. $(x^2 - 2x)^2 - (x-1)^2 + 1 = 0$, nechta ildizga ega?

A) 4 B) 2 C) 3 D) 8

148. $(x^2 - 2x)^2 - (x-1)^2 + 1 = 0$, ildizlari yig'indisini toping.

A) 7 B) 1 C) 5 **D) 4**

149. $\log_2(x^2 - 4x)^2 = 2 \cdot \log_2(18 - 5x)$ tenglamaning kichik ildizini toping.

A) $-\frac{1+\sqrt{73}}{2}$ B) 1 C) -3 D) $\frac{\sqrt{73}-1}{2}$

150. $\log_2(x^2 - 4x)^2 = 2 \cdot \log_2(18 - 5x)$ tenglamaning katta ildizini toping.

A) $-\frac{1+\sqrt{73}}{2}$ **B) 3** C) -3 D) $\frac{\sqrt{73}-1}{2}$

151. $\log_4\left(8\left(1+\frac{1}{x}\right)^2\right) = \sqrt{2 - \log_4 \frac{x}{x+1}} - \log_4 \frac{1}{2}$ tenglamaning haqiqiy ildizlari yig'indisini toping.

A) $\sqrt{2}+1$ B) $\sqrt{2}-1$ C) 0 D) $\sqrt{2}+2$

152. $\begin{cases} x^3 + y^6 = 91 \\ x + y^2 = 7 \end{cases}$ tenglamalar sistemasining barcha haqiqiy yechimlari $(x_1; y_1); \ldots; (x_n; y_n)$ bo'lsin. $x_1 + y_1 + \cdots + x_n + y_n$ ni toping.

A) 10 B) 16 C) 6 **D) 14**

153. $\begin{cases} x^3 + y^6 = 91 \\ x + y^2 = 7 \end{cases}$ tenglamalar sistemasining barcha haqiqiy yechimlari $(x_1; y_1); \ldots; (x_n; y_n)$ bo'lsin. $x_1 \cdot y_1 \cdot \ldots \cdot x_n \cdot y_n$ ni toping.

A) 864 B) 36 C) 576 **D) 1728**

154. $\frac{x-\sqrt{x}-2}{x-\sqrt{x}-6} < 0$ tengsizlikni butun sonlardan iborat yechimlari nechta?

A) 4 B) 6 C) 5 D) 2

155. $\frac{x-\sqrt{x}-6}{x-\sqrt{x}-12} < 0$ tengsizlikni butun sonlardan iborat yechimlari nechta?

A) 6 B) 7 C) 5 D) 4

156. $\frac{x-4\sqrt{x}+3}{x-5\sqrt{x}+6} < 0$ tengsizlikni butun sonlardan iborat yechimlari nechta?

A) 2 B) 1 C) 5 D) 3

157. $\frac{x-\sqrt{x}-6}{x-5\sqrt{x}+4} < 0$ tengsizlikni butun sonlardan iborat yechimlari nechta?

A) 7 B) 6 C) 4 D) 3

158. $\frac{x+\sqrt{x}-2}{x-2\sqrt{x}-3} < 0$ tengsizlikni butun sonlardan iborat yechimlari nechta?

A) 7 B) 6 C) 5 D) 8

1. $\begin{cases} x + y = 7 \\ lgx + lgy = 1 \end{cases}$ tenglamalar sistemasining yechimlaridan iborat barcha x va y larning yig'indisini toping

A) 14 B) 20 C) 7 D) 12

2. $\begin{cases} x + y = 52 \\ lgx + lgy = 2 \end{cases}$ tenglamalar sistemasining yechimlaridan iborat barcha x va y larning yig'indisini toping

A) 104 B) 100 C) 62 D) 52

3. $\begin{cases} x - y = 3 \\ lgx + lgy = 1 \end{cases}$ tenglamalar sistemasining yechimlaridan iborat barcha x va y larning yig'indisini toping

A) 7 B) 14 C) 10 D) 6

17. $A_{x-1}^2 - C_x^1 = 7,\ x \in N$ tenglamani yeching.

A) 5 B) 4 C) 1 D) 2

18. $A_{x-1}^2 + C_x^1 = 5,\ x \in N$ tenglamani yeching.

A) 3 B) 5 C) 1 D) 2

19. $C_x^2 + C_x^1 = 1,\ x \in N$ tenglamani yeching.

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

20. $C_x^2 - C_x^1 = 2,\ x \in N$ tenglamani yeching.

A) 4 B) 2 C) 1 D) 5

21. $2C_{x+1}^2 - A_x^2 = 10,\ x \in N$ tenglamani yeching.

A) 5 B) 2 C) 1 D) 4

22. $4C_{x+1}^2 - A_x^2 = 4,\ x \in N$ tenglamani yeching.

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

23. $2C_{x+1}^2 - C_x^2 = 2,\ x \in N$ tenglamani yeching.

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

24. $A_x^3 + C_x^{x-2} = 14x,\ x \in N$ tenglamani yeching.

A) 5 B) 6 C) 3 D) 4

25. $A_x^3 + C_x^{x-2} = x,\ x \in N$ tenglamani yeching.

A) 2 B) 1 C) 3 D) 5

26. $C_5^4 + C_5^3$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_6^4 B) C_5^2 C) C_6^5 D) C_6^3

27. $C_9^6 + C_9^5$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_{10}^6 B) C_9^4 C) C_{10}^5 D) C_9^3

28. $C_7^4 + C_7^3$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_8^4 B) C_7^2 C) C_8^5 D) C_7^5

29. $C_8^3 + C_8^2$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_9^3 B) C_8^2 C) C_9^5 D) C_8^5

30. $C_{11}^4 + C_{11}^3$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_{12}^4 B) C_{11}^7 C) C_{11}^5 D) C_{12}^7

31. $C_9^6 + 3C_9^5 + 3C_9^4 + C_9^3$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_{12}^6 B) C_{10}^6 C) C_{11}^5 D) C_9^7

32. $C_9^5 + 3C_9^4 + 3C_9^3 + C_9^2$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_{12}^5 B) C_{10}^6 C) C_{11}^5 D) C_9^7

33. $C_6^5 + 3C_6^4 + 3C_6^3 + C_6^2$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_9^5 B) C_9^3 C) C_8^5 D) C_{10}^5

34. $C_7^6 + 3C_7^5 + 3C_7^4 + C_7^3$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_{10}^6 B) C_{10}^4 C) C_{11}^5 D) C_9^6

35. $C_8^5 + 3C_8^4 + 3C_8^3 + C_8^2$ ifodaga quyidagilardan qaysi biri teng kuchli bo'ladi?

A) C_{11}^5 B) C_{10}^6 C) C_{11}^3 D) C_{10}^7

36. Bir kunlik dars jadvalida turli fanlar bo'yicha 3 ta dars bor. 11 ta fandan iborat bo'lgan shunday jadvallar sonini toping.

A) 990 B) 165 C) 1100 D) 720

37. Bir kunlik dars jadvalida turli fanlar bo'yicha 4 ta dars bor. 10 ta fandan iborat bo'lgan shunday jadvallar sonini toping.

A) 4940 B) 210 C) 420 D) 4320

38. Bir kunlik dars jadvalida turli fanlar bo'yicha 3 ta dars bor. 10 ta fandan iborat bo'lgan shunday jadvallar sonini toping.

A) 720 B) 210 C) 120 D) 990

39. Bir kunlik dars jadvalida turli fanlar bo'yicha 3 ta dars bor. 9 ta fandan iborat bo'lgan shunday jadvallar sonini toping.

A) 504 B) 84 C) 120 D) 720

40. Bir kunlik dars jadvalida turli fanlar bo'yicha 4 ta dars bor. 9 ta fandan iborat bo'lgan shunday jadvallar sonini toping.

A) 3024 B) 504 C) 126 D) 4940

Aralash

1. x ning qanday qiymatlarida $1; 2(x-1); 4(x-1)^2; \ldots$ ketma – ketlik cheksiz kamayuvchi geometrik progressiya tashkil etadi?

A) $(0,5;1) \cup (1;1,5)$ B) $(-0,5;0) \cup (1;1,5)$
C) $(-0,5;0) \cup (1,5;2)$ D) $(0,5;0) \cup (1;1,5)$

2. x ning qanday qiymatlarida $1; 2(x-3); 4(x-3)^2; \ldots$ ketma – ketlik cheksiz kamayuvchi geometrik progressiya tashkil etadi?

A) $(2,5;3) \cup (3;3,5)$ B) $(0,5;0) \cup (1;1,5)$
C) $(2,5;4) \cup (4;4,5)$ D) $(1,5;2) \cup (2;2,5)$

3. x ning qanday qiymatlarida $1; 2(x+2); 4(x+2)^2; \ldots$ ketma – ketlik cheksiz kamayuvchi geometrik progressiya tashkil etadi?

A) $(-2,5;-2) \cup (-2;-1,5)$

B) $(-0,5;0) \cup (1;1,5)$

C) $(-2,5;-2) \cup (1;1,5)$

D) $(-1,5;-1) \cup (2;2,5)$

4. $2^n - 1$ son n ning qanday qiymatlarida 7 ga karrali bo'ladi? $(n \in N)$

A) 3 ga karrali qiymatlarida

B) 2 ga karrali qiymatlarida

C) 5 ga karrali qiymatlarida

D) 7 ga karrali qiymatlarida

5. Agar barcha $a, b \in Z$ sonlar uchun $(a+2)$ va $(13-b)$ifodaning qiymati 11 ga bo'linsa, $a+b$ ning qiymatini toping.

A) 11 B) 5 C) 7 D) 13

6. Agar barcha $a, b \in Z$ sonlar uchun $(a+2)$ va $(9-b)$ifodaning qiymati 7 ga bo'linsa, $a+b$ ning qiymatini toping.

A) 11 B) 5 **C) 7** D) 13

7. Agar p soni 3 dan katta bo'lgan tub son bo'lsa, p^2-1 soni quyidagilarning qaysi biriga qoldiqsiz bo'linadi?

A) 11 **B) 24** C) 36 D) 9

8. a va b haqiqiy sonlar uchun $[a]=[b]$ tenglik o'rinli bo'lsa, $a-b$ ning barcha qiymatlarini toping ($[a]-a$ sonining butun qismi)

A) (0,5; 1) **B)** $(-1;1)$ C) (0; 1) D) $(-1;0)$

9. Agar a, b sonlar uchun $a^2 < a$, $b > 1$ bo'lsa, quyidagilarning qaysi biri doim o'rinli?

A) $ab < 4$ **B)** $\boldsymbol{ab > a}$ C) $ab < 0$ D) $ab < a$

10. Agar a, b sonlar uchun $a^2 < a$, $b > 2$ bo'lsa, quyidagilarning qaysi biri doim o'rinli?

A) $ab < 4$ **B)** $\boldsymbol{ab > a}$ C) $ab < 0$ D) $ab < a$

11. Agar a, b sonlar uchun $a^2 < a$, $b > 1{,}5$ bo'lsa, quyidagilarning qaysi biri doim o'rinli?

A) $ab < 4$ **B)** $\boldsymbol{ab > a}$ C) $ab < 0$ D) $ab < a$

12. Agar a, b sonlar uchun $a^2 < a$, $b > 3$ bo'lsa, quyidagilarning qaysi biri doim o'rinli?

A) $ab < 4$ **B)** $\boldsymbol{ab > a}$ C) $ab < 0$ D) $ab < a$

13. Agar a, b sonlar uchun $a^2 < a$, $b > 4$ bo'lsa, quyidagilarning qaysi biri doim o'rinli?

A) $ab < 4$ **B)** $\boldsymbol{ab > a}$ C) $ab < 0$ D) $ab < a$

1. Ko'paytmasi 7920 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 38 B) 42 C) 46 D) 34

2. Ko'paytmasi 5040 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 34 B) 38 C) 42 D) 46

3. Ko'paytmasi 11880 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 42 B) 38 C) 46 D) 34

4. Ko'paytmasi 3024 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 30 B) 38 C) 42 D) 34

5. Ko'paytmasi 1680 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 26 B) 42 C) 30 D) 34

6. Ko'paytmasi 840 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 22 B) 26 C) 30 D) 34

7. Ko'paytmasi 360 ga teng bo'lgan to'rtta ketma-ket natural sonlar yig'indisini toping.

A) 18 B) 22 C) 26 D) 30

8. Ko'paytmasi 3192 ga teng bo'lgan ikkita ketma-ket natural sonlar yig'indisini toping.

A) 113 B) 115 C) 111 D) 117

9. Ko'paytmasi 2352 ga teng bo'lgan ikkita ketma-ket natural sonlar yig'indisini toping.

A) 97 B) 95 C) 99 D) 101

10. Ko'paytmasi 3306 ga teng bo'lgan ikkita ketma-ket natural sonlar yig'indisini toping.

A) 115 B) 113 C) 111 D) 117

11. $\frac{1}{2}+\frac{1}{2+4}+\frac{1}{2+4+6}+\cdots+\frac{1}{2+4+6+8+\cdots+20}$ yig'indini hisoblang.

A) $\frac{10}{11}$ B) $\frac{12}{13}$ C) 1,1 D) 0,9

12. $\frac{1}{2}+\frac{1}{2+4}+\frac{1}{2+4+6}+\cdots+\frac{1}{2+4+6+8+\cdots+22}$ yig'indini hisoblang.

A) $\frac{11}{12}$ B) $\frac{12}{13}$ C) $\frac{10}{11}$ D) $\frac{9}{10}$

13. $\frac{1}{2}+\frac{1}{2+4}+\frac{1}{2+4+6}+\cdots+\frac{1}{2+4+6+8+\cdots+24}$ yig'indini hisoblang.

A) $\frac{12}{13}$ B) $\frac{11}{12}$ C) $\frac{10}{11}$ D) $\frac{13}{14}$

14. $\frac{1}{2}+\frac{1}{2+4}+\frac{1}{2+4+6}+\cdots+\frac{1}{2+4+6+8+\cdots+26}$ yig'indini hisoblang.

A) $\frac{13}{14}$ B) $\frac{11}{12}$ C) $\frac{10}{11}$ D) $\frac{12}{13}$

15. $\frac{1}{2}+\frac{1}{2+4}+\frac{1}{2+4+6}+\cdots+\frac{1}{2+4+6+8+\cdots+30}$ yig'indini hisoblang.

A) $\frac{15}{16}$ B) $\frac{14}{15}$ C) $\frac{13}{14}$ D) $\frac{12}{13}$

16. $P(x)=4x^2+20x+25$ va $Q(x)=x^3-3x^2+x+2$ ko'phadlar berilgan. $x=-2$ da $\frac{(P(x))^3+(Q(x))^3}{(P(x))^2-P(x)\cdot Q(x)+(Q(x))^2}+\frac{(P(x))^3-(Q(x))^3}{(P(x))^2+P(x)\cdot Q(x)+(Q(x))^2}$ ifodaning qiymatini toping

A) 2 B) 1 C) −2 D) 0

17. $P(x)=9x^2-30x+25$ va $Q(x)=x^3+2x^2-3x+1$ ko'phadlar berilgan. $x=2$ da $\frac{(P(x))^3+(Q(x))^3}{(P(x))^2-P(x)\cdot Q(x)+(Q(x))^2}+\frac{(P(x))^3-(Q(x))^3}{(P(x))^2+P(x)\cdot Q(x)+(Q(x))^2}$ ifodaning qiymatini toping

A) 2 B) 1 C) 8 D) 0

18. $P(x)=4x^2-20x+25$ va $Q(x)=x^3-3x^2+x+2$ ko'phadlar berilgan. $x=2$ da $\frac{(P(x))^3+(Q(x))^3}{(P(x))^2-P(x)\cdot Q(x)+(Q(x))^2}+\frac{(P(x))^3-(Q(x))^3}{(P(x))^2+P(x)\cdot Q(x)+(Q(x))^2}$ ifodaning qiymatini toping

A) 2 B) 1 C) −2 D) 0

25. 10 ta guldan 3 talik guldasta yasash kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 B)56 C) 84 D) 30

26. 8 ta guldan 3 talik guldasta yasash kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 **B)56** C) 84 D) 30

27. 9 ta guldan 3 talik guldasta yasash kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 B)56 **C) 84** D) 30

28. 11 ta guldan 3 talik guldasta yasash kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 165 B)56 C) 84 D) 30

29. 12 ta guldan 3 talik guldasta yasash kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 B)56 C) 84 **D) 220**

30. 10 ta guldan 4 talik guldasta yasash kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 **B)210** C) 84 D) 30

31. 10 ta kitobdan 3 talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 B)56 C) 84 D) 30

32. 8 ta kitobdan 3 talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 **B)56** C) 84 D) 30

33. 9 ta kitobdan 3 talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 B)56 **C) 84** D) 30

34. 12 ta kitobdan 3 talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 220 B)56 C) 84 D) 120

35. 11 ta kitobdan 3 talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 **B)165** C) 84 D) 30

36. 10 ta kitobdan 4talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 210 B)56 C) 84 D) 120

37. 12 ta kitobdan 4 talik sovg'a to'plamini tuzish kerak. Bu ishni necha usulda amalga oshirsa bo'ladi?

A) 120 **B)495** C) 210 D) 330

38. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 85%i ingliz tilini, 75%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 50 **B)60** C) 30 D) M.sh.et.emas

39. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 80%i ingliz tilini, 70%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 50 B)60 C) 30 D) M.sh.et.emas

40. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 90%i ingliz tilini, 60%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 50 B)60 C) 75 D) M.sh.et.emas

41. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 85%i ingliz tilini, 65%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 60 **B)50** C) 75 D) M.sh.et.emas

42. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 91%i ingliz tilini, 79%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 70 B)60 C) 50 D) M.sh.et.emas

43. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 95%i ingliz tilini, 75%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 70 B)60 C) 50 D) M.sh.et.emas

44. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 87%i ingliz tilini, 63%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 75 **B)50** C) 60 D) M.sh.et.emas

45. Ta'lim muassasasida barcha o'quvchilar kamida bitta ingliz yoki nemis tilida so'zlasha oladilar, ayrimlari esa ikkala tilni biladilar. O'quvchilarning 93%i ingliz tilini, 77%i nemis tilini biladilar. Ikkala tilni ham biladigan o'quvchilar barcha o'quvchilarning necha foizini tashkil etadi?

A) 70 B)60 C) 50 D) M.sh.et.emas

46. Axborot resurs markazida 50 ta kompyuter o'rnatilmoqda, bunda ayrimlari sim bilan ulanmoqda. Har bir kompyuterdan 8 ta sim chiqishi lozim bo'lsa, jami nechta sim kerak?

A) 200 B) 400 C) 100 D) 50

47. Axborot resurs markazida 40 ta kompyuter o'rnatilmoqda, bunda ayrimlari sim bilan ulanmoqda. Har bir kompyuterdan 8 ta sim chiqishi lozim bo'lsa, jami nechta sim kerak?

A) 160 B) 400 C) 200 D) 100

48. Axborot resurs markazida 45 ta kompyuter o'rnatilmoqda, bunda ayrimlari sim bilan ulanmoqda. Har bir kompyuterdan 8 ta sim chiqishi lozim bo'lsa, jami nechta sim kerak?

A) 200 **B) 180** C) 100 D) 360

49. Axborot resurs markazida 35 ta kompyuter o'rnatilmoqda, bunda ayrimlari sim bilan ulanmoqda. Har bir kompyuterdan 8 ta sim chiqishi lozim bo'lsa, jami nechta sim kerak?

A) 200 B) 290 **C) 140** D) 150

50. Axborot resurs markazida 40 ta kompyuter o'rnatilmoqda, bunda ayrimlari sim bilan ulanmoqda. Har bir kompyuterdan 6 ta sim chiqishi lozim bo'lsa, jami nechta sim kerak?

A) 200 B) 240 C) 100 **D) 120**

44. Agar $a < 0$ bo'lsa, $\frac{4}{x} < \frac{1}{a}$ tengsizlikni yeching.

A) $4a < x < 1$ B) $3a < x < 2$
C) $4a < x < 0$ D) $x < a$

45. Agar $a < 0$ bo'lsa, $\frac{5}{x} < \frac{1}{a}$ tengsizlikni yeching.

A) $5a < x < 1$ B) $5a < x < 2$
C) $5a < x < 0$ D) $x < a$

46. $a^2 < 38$ tengsizlikni qanoatlantiradigan eng katta natural sonning natural bo'luvchilari yig'indisini toping.

A) 12 B) 11 C) 18 D) 16

47. $a^2 < 65$ tengsizlikni qanoatlantiradigan eng katta natural sonning natural bo'luvchilari yig'indisini toping.

A) 12 B) 11 C) 15 D) 16

48. $a^2 < 99$ tengsizlikni qanoatlantiradigan eng katta natural sonning natural bo'luvchilari yig'indisini toping.

A) 13 B) 11 C) 18 D) 16

49. $a^2 < 422$ tengsizlikni qanoatlantiradigan eng katta natural sonning natural bo'luvchilari yig'indisini toping.

A) 42 B) 41 C) 48 D) 56

50. $a^2 < 260$ tengsizlikni qanoatlantiradigan eng katta natural sonning natural bo'luvchilari yig'indisini toping.

A) 42 B) 31 C) 38 D) 36

51. $x^2 - 4x + 4 \le 0$ tengsizlik o'rinli bo'ladigan barcha haqiqiy x lar uchun $|x - 2|$ ifadaning qiymatini toping.

A) 0 B) 1 C) $x - 2$ D) $2 - x$

52. $x^2 - 6x + 9 \le 0$ tengsizlik o'rinli bo'ladigan barcha haqiqiy x lar uchun $|x - 3|$ ifadaning qiymatini toping.

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

53. $4x^2 + 4x + 1 \le 0$ tengsizlik o'rinli bo'ladigan barcha haqiqiy x lar uchun $2x + 1$ ifadaning qiymatini toping.

A) 0 B) 1 C) $2x + 1$ D) $1 - 2x$

54. $\frac{2}{x} + 3 \le \sqrt{41 - \frac{16}{x}}$ tengsizlikni yeching.

A) $x < -1$ yoki $x > 2$ B) $x < 0$ yoki $x > 1$
C) $x < 1$ yoki $x > 2$ D) $x < 0$ yoki $x \ge 1$

55. $\log_x 8 > 3$ tengsizlikni yeching.

A) (1; 2) B) [1; 2] C) (0; 1) D) (1; 3)

56. $\sqrt{2x + 4} < \sqrt{x^2 + 8x - 3}$ tengsizlikni yeching.

A) (1; 2) B) (0; ∞) C) (1; ∞) D) (1; 3)

57. $\sqrt{3 - x} < x - 1$ tengsizlikni yeching.

A) (1; 2) B) (0; 3) C) (2; 3] D) (1; 3]

58. $a < 0$ va $b > 0$ bo'lsa, $ax + a > bx + b$ tengsizlikni yeching.

A) $x > b$ B) $x < 0$ C) $x < -1$ D) $x > a$

59. $a < 0$ va $b > 0$ bo'lsa, $ax + a > bx + b$ tengsizlikning eng kata butun yechimini toping.

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

60. $a > b$ bo'lsa, $bx + b^2 > a^2 + ax$ tengsizlikni yeching.

A) $x < -a - b$ B) $x > a + b$
C) $x < -a + b$ D) $x < a - b$

61. $x < 6$ bo'lsa, $3x + 2y - 6 = 0$ tenglamadan y ning qiymatlarini toping.

A) $y > 1$ B) $y < 0$ C) $y < -1$ D) $y > 6$

62. $x < 8$ bo'lsa, $3x + 2y - 6 = 0$ tenglamadan y ning qiymatlarini toping.

A) $y > 1$ B) $y < 8$ C) $y < -6$ D) $y > -9$

63. $x < 6$ bo'lsa, $3x + 4y - 6 = 0$ tenglamadan y ning qiymatlarini toping.

A) $y > 3$ B) $y < 0$ C) $y < -1$ D) $y > -3$

64. $x < 0$ da $|x - |x - 11|| - 11$ ifodani modul belgisisiz yozing.

A) $-x$ B) $-2x$ C) 0 D) $2x$

65. $x < 0$ da $|x - |x - 10|| - 10$ ifodani modul belgisisiz yozing.

A) $-x$ B) $-2x$ C) 0 D) $2x$

66. Taqqoslang. $a = 40^{15}, b = 25^{15} + 15^{15}$

A) $a > b$ B) $a < b$ C) $a = b$ D) $a = b + 1$

67. Ushbu $y = \frac{\sqrt{2x-1} + \sqrt{x-1}}{x^2 - 5x + 8}$ funksiyaning aniqlanish sohasini toping.

A) $(-\infty; 0]$ B) [1; 2] C) [0; ∞) D) [1; ∞)

68. Ushbu $y = \frac{\sqrt{x+1} + \sqrt{7x - 6 - x^2}}{|5x - x^2|}$ funksiyaning aniqlanish sohasini toping.

A) [1; 6] B) [1; 2] C) [0; 5) ∪ (5; 6]
D) [1; 5) ∪ (5; 6]

69. Ushbu $y = \frac{\sqrt{6x - x^2 - 5} + \sqrt{x-3}}{\sqrt{x^2 + 8x + 18}}$ funksiyaning aniqlanish sohasini toping.

A) $(-1; 0]$ B) [1; 2] C) [0; 5] D) [3; 5]

70. Ushbu $y = \frac{|x^2 - x - 12|}{\sqrt{11 - x^2 - 18}}$ funksiyaning aniqlanish sohasini toping.

A) (2; 9] B) [1; 2] C) [0; ∞) D) (2; 9)

71. $y = (2 - x)(x + 2)$, funksiyaning eng katta qiymatini toping.

A) 7 B) 4 C) 5 D) 0

72. $y = 6x + 3$ va $y = -8 - 2x$, funksiyalar grafiklari qaysi chorakda kesishadi.

A) II B) I C) III D) IV

73. $f(x) = mx^2 - (m-9)x - 2$ funksiyaning simetriya o'qi tenglamasi $x = -1$ bo'lsa, m ni toping

A) 3 B) 7 C) 5 D) 1

74. $f(x) = mx^2 - (m-9)x - 2$, Funksiyaning simetriya o'qi tenglamasi $x = -2$ bo'lsa m ni toping

A) 3 B) 2 C) 1,8 D) 1,5

75. $f(x) = mx^2 - (m-9)x - 2$, Funksiyaning simetriya o'qi tenglamasi $x = -3$ bo'lsa m ni toping

A) 3 B) 4 C) 0,5 D) 1,5

76. $f(x) = mx^2 - (m-12)x - 2$, parabolaning simetriya o'qi tenglamasi $x = -1$ bo'lsa m ni toping

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

77. $f(x) = mx^2 - (m+10)x - 2$ parabolaning simmetriya o'qi tenglamasi $x = -2$ bo'lsa m ni toping

A) 0 B) 1 C) 2 D) -3

78. $f(x) = -3x^2 + 9x + t - 3$, funksiyaning eng kata qiymati 4ga teng bo'lsa t ni toping.

A) 0,25 B) 1 C) 6 D) -3

79. $f(x) = -3x^2 + 9x + t - 3$, funksiyaning eng kata qiymati 5ga teng bo'lsa t ni toping.

A) 0 B) 1.5 C) 1.25 D) -1

80. $f(x) = -3x^2 + 9x + t - 3$, funksiyaning eng katta qiymati 3ga teng bo'lsa t ni toping.

A) -0.75 B) -1,5 C) 0 D) 4

81. $f(x) = -3x^2 + 9x + t - 4$, funksiyaning eng katta qiymati 4ga teng bo'lsa t ni toping.

A) 5 B) 1.5 C) -1.25 D) 1.25

82. $\left(\frac{x}{x+1}\right)^2 + \left(\frac{x}{x-1}\right)^2 = 90$, tenglamaning haqiqiy ildizlari yig'indisini toping

A) $\frac{45}{44}$ B) $\frac{15}{10}$ C) $\frac{5}{4}$ D) $\frac{25}{16}$

83. $(x^2 + 3)^2 - 7(x^4 - 9) + 6(x^2 - 3)^2 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $\frac{1}{x_1} + \frac{1}{x_2}$ ni toping.

A) 0 B) 1 C) -2 D) 2.4

84. $(x^2 + 3)^2 - 7(x^4 - 9) + 6(x^2 - 3)^2 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $\frac{1}{x_1^2} + \frac{1}{x_2^2}$ ni toping

A) $\frac{1}{3}$ B) $\frac{10}{21}$ C) $\frac{1}{4}$ D) $\frac{25}{16}$

85. $(x^2 + 3)^2 - 7(x^4 - 9) + 6(x^2 - 3)^2 = 0$, tenglamaning ildizlari x_1, x_2 bo'lsa $\frac{x_1}{x_2} + \frac{x_2}{x_1}$ ni toping

A) 1 B) -2 C) -2.5 D) 2.4

Kombinatorika

1.10 nafar o'quvchidan iborat guruhda 3 nafar a'zodan tashkil topgan qo'mitani nechta usul bilan tanlash mumkin?

A)120 B)56 C)84 D)30

2. 10 nafar o'quvchidan iborat guruhda 4 nafar a'zodan tashkil topgan qo'mitani nechta usul bilan tanlash mumkin?

A)210 B)56 C)84 D)120

3. 8 nafar o'quvchidan iborat guruhda 3 nafar a'zodan tashkil topgan qo'mitani nechta usul bilan tanlash mumkin?

A)120 **B)56** C)84 D)30

4. 9 nafar o'quvchidan iborat guruhda 3 nafar a'zodan tashkil topgan qo'mitani nechta usul bilan tanlash mumkin?

A)120 B)56 **C)84** D)30

5. 11 nafar o'quvchidan iborat guruhda 3 nafar a'zodan tashkil topgan qo'mitani nechta usul bilan tanlash mumkin?

A)165 B)56 C)84 D)30

6. 12 nafar o'quvchidan iborat guruhda 3 nafar a'zodan tashkil topgan qo'mitani nechta usul bilan tanlash mumkin?

A)220 B)56 C)84 D)120

7. 8 mart kuni 10 nafar o'gil bola o'quvchilardan har biri 8 nafar qiz bola sinfdoshiga bittadan sovg'a berdi. Ma'lumki sinfdagi har bir qiz 5 ta sovg'a oldi. Sinfda nechta qiz o'qiydi?

A)16 B)18 C)24 D)8

8. 8 mart kuni 10 nafar o'gil bola o'quvchilardan har biri 9 nafar qiz bola sinfdoshiga bittadan sovg'a berdi. Ma'lumki sinfdagi har bir qiz 5 ta sovg'a oldi. Sinfda nechta qiz o'qiydi?

A)16 **B)18** C)24 D)8

9. 8 mart kuni 10 nafar o'gil bola o'quvchilardan har biri 10 nafar qiz bola sinfdoshiga bittadan sovg'a berdi. Ma'lumki sinfdagi har bir qiz 5 ta sovg'a oldi. Sinfda nechta qiz o'qiydi?

A)20 B)18 C)24 D)16

10. 8 mart kuni 10 nafar o'gil bola o'quvchilardan har biri 11 nafar qiz bola sinfdoshiga bittadan sovg'a berdi. Ma'lumki sinfdagi har bir qiz 5 ta sovg'a oldi. Sinfda nechta qiz o'qiydi?

A)22 B)18 C)24 D)8

11. 8 mart kuni 10 nafar o'gil bola o'quvchilardan har biri 12 nafar qiz bola sinfdoshiga bittadan sovg'a berdi. Ma'lumki sinfdagi har bir qiz 5 ta sovg'a oldi. Sinfda nechta qiz o'qiydi?

A)16 B)18 **C)24** D)8

12. 10 nafar pochta xodimidan 8 ta pochta qutisiga 1 tadan gazeta solindi. Ma'lumki har bir pochta qutisiga 5 tadan gazeta solindi. Jami bo'lib nechta quti bor?

A)16 B)18 C)24 D)8

13. 10 nafar pochta xodimidan 9 ta pochta qutisiga 1 tadan gazeta solindi. Ma'lumki har bir pochta qutisiga 5 tadan gazeta solindi. Jami bo'lib nechta quti bor?

A)20 **B)18** C)24 D)8

14. 10 nafar pochta xodimidan 10 ta pochta qutisiga 1 tadan gazeta solindi. Ma'lumki har bir pochta qutisiga 5 tadan gazeta solindi. Jami bo'lib nechta quti bor?

A)20 B)18 C)24 D)8

15. 10 nafar pochta xodimidan 11 ta pochta qutisiga 1 tadan gazeta solindi. Ma'lumki har bir pochta qutisiga 5 tadan gazeta solindi. Jami bo'lib nechta quti bor?

A)22 B)18 C)24 D)8

16. 10 nafar pochta xodimidan 12 ta pochta qutisiga 1 tadan gazeta solindi. Ma'lumki har bir pochta qutisiga 5 tadan gazeta solindi. Jami bo'lib nechta quti bor?

A)20 B)18 **C)24** D)8

17. Maktab hovlisida 1006 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

18. Maktab hovlisida 996 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

19. Maktab hovlisida 1006 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

20. Maktab hovlisida 994 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

21. Maktab hovlisida 992 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

22. Maktab hovlisida 984 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

23. Maktab hovlisida 956 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

24. Maktab hovlisida 966 ta atirgul ekilgan. Samandar barcha atirgullarning yarmini, Diyora ham barcha atirgullarning yarmini suv qo'yib sug'ordi. Bunda aynan 3 ta atirgul ham Diyora, ham Samandar tomonidan sug'orilganligi aniqlandi. Nechta atirgul sug'orilmay qoldi?

A) 3 B)16 C) 0 D) Mas.ye.e.e

51. Axborot resurs markazida 45 ta kompyuter o'rnatilmoqda, bunda ayrimlari sim bilan ulanmoqda. Har bir kompyuterdan 6 ta sim chiqishi lozim bo'lsa, jami nechta sim kerak?

A) 135 B) 270 C) 100 D) 50

52. 1, 2 , 3, …, 9 raqamlaridan nechta to'rt xonali sonlar tuzish mumkin? (4 ta turli raqamlar)

A) 3024 B) 3270 C) 1024 D) 4040

53. 1, 2 , 3, …, 9 raqamlaridan nechta 5 xonali sonlar tuzish mumkin? (5 ta turli raqamlar)

A) 15120 B) 13270 C) 10024 D) 4040

54. 1, 2 , 3, …, 7 raqamlaridan nechta to'rt xonali sonlar tuzish mumkin? (4 ta turli raqamlar)

A) 510 **B) 840** C) 960 D) 400

55. 1, 2 , 3, …, 9 raqamlaridan nechta 3 xonali sonlar tuzish mumkin? (3 ta turli raqamlar)

A) 504 B) 320 C) 124 D) 840

56. 1, 2 , 3, …, 7 raqamlaridan nechta 5 xonali sonlar tuzish mumkin? (5 ta turli raqamlar)

A) 2520 B) 3270 C) 1024 D) 4040

57. 10 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 3 elementli qism to'plam tuzish mumkin?

A) 240 **B) 120** C) 60 D) 720

57. 10 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 4 elementli qism to'plam tuzish mumkin?

A) 240 B) 120 **C) 210** D) 720

58. 10 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 5 elementli qism to'plam tuzish mumkin?

A) 240 **B) 252** C) 60 D) 256

59. 12 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 4 elementli qism to'plam tuzish mumkin?

A) 240 B) 420 C) 360 **D) 495**

60. 5498 sonining raqamlaridan faqat bir marta foydalanib, nechta to'rt xonali son yozish mumkin?

A) 24 B) 16 C) 9 **D) 12**

61. 9 ta manzilga 9 ta xatni ikkita xat tashuvchi olib borishi kerak. Ular ishini necha xil usulda bo'lib oladilar?

A) 512 B) 520 C) 460 D) 495

62. 8 ta manzilga 8 ta xatni ikkita xat tashuvchi olib borishi kerak. Ular ishini necha xil usulda bo'lib oladilar?

A) 256 B) 512 C) 1024 D) 460

63. 9 ta manzilga 9 ta xatni ikkita xat tashuvchi olib borishi kerak. Ular ishini necha xil usulda bo'lib oladilar?

A) 512 B) 520 C) 460 D) 495

64. 7 ta manzilga 7 ta xatni ikkita xat tashuvchi olib borishi kerak. Ular ishini necha xil usulda bo'lib oladilar?

A) 512 B) 256 C) 64 **D) 128**

65. 6 ta manzilga 6 ta xatni ikkita xat tashuvchi olib borishi kerak. Ular ishini necha xil usulda bo'lib oladilar?

A) 64 B) 512 C) 56 D) 128

1. 1, 2, 3, …, 9 raqamlaridan nechta har xil to'rt xonali sonlar tuzish mumkin (bu yerda to'rt xonali sonlar turli raqamlardan tashkil topgan)?

A) 3024 B) 15120 C) 1612 D) 504

2. 1, 2, 3, …, 9 raqamlaridan nechta har-xil besh xonali sonlar tuzish mumkin (bu yerda besh xonali sonlar turli raqamlardan tashkil topgan)?

A) 15120 B) 3024 C) 1612 D) 504

3. 1, 2, 3, …, 9 raqamlaridan nechta har xil uch xonali sonlar tuzish mumkin (bu yerda uch xonali sonlar turli raqamlardan tashkil topgan)?

A) 504 B) 15120 C) 1612 D) 3024

4. 1, 2, 3, …, 7 raqamlaridan nechta har xil to'rt xonali sonlar tuzish mumkin (bu yerda to'rt xonali sonlar turli raqamlardan tashkil topgan)?

A) 840 B) 2520 C) 210 D) 720

5. 1, 2, 3, …, 7 raqamlaridan nechta har xil besh xonali sonlar tuzish mumkin (bu yerda besh xonali sonlar turli raqamlardan tashkil topgan)?

A) 2520 B) 840 C) 210 D) 5040

6. 10 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 3 elementli qism to'plam tuzish mumkin?

A) 120 B) 60 C) 128 D) 210

7. 10 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 4 elementli qism to'plam tuzish mumkin?

A) 210 B) 120 C) 128 D) 256

8. 10 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 5 elementli qism to'plam tuzish mumkin?

A) 252 B) 120 C) 128 D) 210

9. 12 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 4 elementli qism to'plam tuzish mumkin?

A) 495 B) 252 C) 256 D) 450

10. 12 ta har xil elementdan tashkil topgan to'plamdan nechta har xil 5 elementli qism to'plam tuzish mumkin?

A) 792 B) 346 C) 768 D) 512

11. Basketbol o'yini uchun 10 nafar sportchidan necha xil usulda 5 nafar sportchidan iborat ikkita jamoa tuzish mumkin?

A) 252 B) 128 C) 210 D) 120

12. Basketbol o'yini uchun 15 nafar sportchidan necha xil usulda 5 nafar sportchidan iborat ikkita jamoa tuzish mumkin?

A) 3013 B) 1716 C) 2184 D) 2340

13. Boleybol o'yini uchun 12 nafar sportchidan necha xil usulda 6 nafar sportchidan iborat ikkita jamoa tuzish mumkin?

A) 924 B) 1056 C) 2184 D) 792

14. 8 nafar sportchidan necha xil usulda 4 nafar sportchidan iborat ikkita jamoa tuzish mumkin?

A) 70 B) 35 C) 105 D) 140

15. 14 nafar sportchidan necha xil usulda 7 nafar sportchidan iborat ikkita jamoa tuzish mumkin?

A) 3432 B) 3450 C) 2002 D) 3003

16. $\frac{C_{2x}^{x+1}}{C_{2x+1}^{x-1}} = \frac{2}{3}$, $x \in N$ tenglamani yeching.

A) 4 B) 5 C) 3 D) 2

57. $(a+2b)^5$ ko`phadning to`rtinchi o`rinda turgan koeffitsiyentini toping.

A) 80 B) 40 C) 32 D) 64

58. $(a+3b)^5$ ko`phadning to`rtinchi o`rinda turgan koeffitsiyentini toping.

A) 270 B) 90 C) 405 D) 81

59. $(a+b)^6$ ko`phadning koeffitsiyentlar yig`indisini toping.

A) 64 B) 32 C) 16 D) 128

60. $(a+2b)^6$ ko`phadning beshinchi o`rinda turgan koeffitsiyentini toping.

A) 240 B) 120 C) 256 D) 128

39. a ning qanday qiymatida $P(x) = -Ax^{12}$ ...

1. Oxirgi raqami 1 bo'lgan va $[49;350]$ kesmaga tegishli bo'lgan barcha natural sonlar yig'indisini toping.

A) 5880 B)4685 C) 5960 D) 4850

2. Oxirgi raqami 1 bo'lgan va $[41;350]$ kesmaga tegishli bo'lgan barcha natural sonlar yig'indisini toping.

A) 5921 B) 5880 C) 5960 D) 4850

3. Oxirgi raqami 1 bo'lgan va $[40;350]$ kesmaga tegishli bo'lgan barcha natural sonlar yig'indisini toping.

A) 5921 B) 5880 C) 5960 D) 4850

4. Oxirgi raqami 1 bo'lgan va $(50;350)$ intervalga tegishli bo'lgan barcha natural sonlar yig'indisini toping.

A) 5921 **B) 5880** C) 5960 D) 4850

5. Oxirgi raqami 1 bo'lgan va $(48;350)$ kesmaga tegishli bo'lgan barcha natural sonlar yig'indisini toping.

A) 5921 **B) 5880** C) 5960 D) 4850

6. $\frac{10^{2015}+10^{2017}}{10^{2016}+10^{2016}}$ hisoblang.

A) $\frac{101}{20}$ B) 1 C) $\frac{110}{24}$ D) $\frac{102}{13}$

7. $\frac{1}{4-2\sqrt{3}} - \frac{1}{4+2\sqrt{3}}$ ni hisoblang.

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

8. $\frac{\sqrt{10}+\sqrt{70}+\sqrt{20}}{\sqrt{2}+\sqrt{14}+2}$ ni hisoblang.

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

9. $\frac{\sqrt{6}+\sqrt{42}+\sqrt{12}}{\sqrt{2}+\sqrt{14}+2}$ ni hisoblang.

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

10. $\frac{2^5\cdot 11^8}{22^{10}} \cdot \frac{34^4\cdot 2057}{17^5}$ ni hisoblang.

A) $\frac{1}{2}$ B) 1 C) 2 D) $\frac{1}{4}$

11. $\frac{2^8\cdot 7^9}{14^{10}} \cdot \frac{26^5\cdot 728}{13^6\cdot 8^4}$ ni hisoblang.

A) $\frac{1}{2}$ **B) 1** C) 2 D) $\frac{1}{4}$

12. $\frac{71^2-23^2+94\cdot 42}{62^2-32^2}$ ni hisoblang.

A) 3 B) 1 C) 2 D) $\frac{1}{4}$

13. $0,(8a)$ davriy kasr qiymati $\frac{28}{33}$ ga teng bo'lsa, a ning qiymatini toping.

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

14. $0,(7a)$ davriy kasr qiymati $\frac{8}{11}$ ga teng bo'lsa, a ning qiymatini toping.

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

15. $0,(5a)$ davriy kasr qiymati $\frac{5}{9}$ ga teng bo'lsa, a ning qiymatini toping.

A) 5 B) 1 C) 2 D) 4

16. $0,(6a)$ davriy kasrning qiymati $\frac{23}{33}$ ga teng bo'lsa, a ning qiymatini toping (bu yerda $\overline{6a}$ ikki xonali son).

A) 9 B) 3 C) 6 D) 4

17. $\left[\frac{2}{96}\right]\cdot 12 + \left[5\frac{2}{37}\right]\cdot 7{,}4 - [5{,}222\ldots]\cdot[2,(7)]$

A) 27 B) 11 C) 25 D) 14

18. $5\cdot\left[12\frac{2}{7}+5\frac{3}{7}\right] - 8\cdot\left[3\frac{2}{3}\right]\cdot[2,(9)]$

A) 13 B) 12 C) 21 D) 14

19. $\left(\left[\frac{218}{1,37}\right]^2 + [-12,(99)]\right)^2$

A) 144 B) 196 C) 225 D) 289

20. $[2,(999)+5,(777)]^2 - [5,(999)+1,(989)]^2$

A) 15 B) 11 C) 25 D) 12

21. $[\pi]^2 + [2,(9)]^2 - [15,(99)]$

A) 5 B) 1 **C) 2** D) 4

o'luvchilari

57. $\sqrt{3}$

A) (1

88. $(x^2+2x-5)^2+2(x^2+2x-5)-5=x$, tenglamaning ildizlar yig`indisini toping.

A) 0 **B) -1** C) -2 D) 4

lantiradigan
l bo'luvchilari

58. a
tengs

A) x

87. $(x^2-8x+18)^2-8(x^2-8x+18)+18=x$, tenglamaning haqiqiy ildizlari nechta?

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

59.
tenj

A)

88. $(x^2-3x+3)^2-3(x^2-3x+3)+3=x$, tenglamaning natural ildizlari nechta?

A) 0 B) 5 C) -1 **D) 2**

60.
ter

A
C

89. $\begin{cases} x^2+(y-1)^2=1 \\ x^2+y^2=4 \end{cases}$ tenglama sistemasi nechta yechimga ega.

6

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

iradigan
uvchilari

90. $x+\sqrt{x+\frac{1}{2}+\sqrt{x+\frac{1}{4}}}=2$, tenglamani yeching.

$x-2|$

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

91. $x\cdot 2^{\log_x 3}<6$, tengsizlikning butun yechimlar sonini toping.

$-3|$

A) 4 B) 3 C) 1 **D) 0**

92. $x\cdot 4^{\log_x 5}\le 20$,, tengsizlikning butun yechimlar sonini toping.

+1

A) 3 B) 1 **C) 2** D) 0

93. $(x^2-9x+16)^2-9(x^2-9x+16)+16=x$ natural yechimlar soni nechta?

A) 2 B) 1 C) 3 D) 0

94. $(x^2-9x+16)^2-9(x^2-9x+16)+16=x$ butun yechimlari yig`indisini toping.

A) 2 **B) 10** C) 3 D) 20

95. $(x^2+x-2)^2+(x^2-x-2)-2=x$ tenglamani haqiyqiy ildizlari nechta?

A) 2 B) 10 C) 5 **D) 4**

96. $(x^2+x-2)^2+(x^2-x-2)-2=x$ nechta natural yechimga ega.

97. $\begin{cases} 2x-y=5 \\ xy=-3 \end{cases}$ $\begin{cases} x^2-y^2=3 \\ x^2+y^2=5 \end{cases}$ tenglamalar sistemalarining birlashmasini qanoatlantiradigan barcha haqiqiy x va y lar yig`indisini toping.

A) −2 B) −3,5 C) 0 **D) −2, 5**

98. $\begin{cases} 2x-y=5 \\ xy=-3 \end{cases}$ $\begin{cases} x^2-y^2=3 \\ x^2+y^2=5 \end{cases}$ tenglamalar sistemalarining birlashmasini qanoatlantiradigan nechta $(x; y)$ juftliklar bor?.

A) 5 ta B) 4 ta C) 2 ta **D) 6 ta**

99. $\begin{cases} x^2+(y+1)^2=1 \\ (2-x)^2+(y+1)^2=1 \end{cases}$ tenglamalar sistemasi nechta butun yechimga ega?

A) 2 B) 3 C) 0 **D) 1**

100. $\begin{cases} (x^2+y^2-13)\cdot(x+y-7)=0 \\ xy=6 \end{cases}$ tenglamalar sistemasi nechta haqiqiy yechimga ega?

A) 2 ta B) 3 ta C) 5 ta **D) 6 ta**

101. $x^2+100x+1=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

102. $x^2+100x+2=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

103. $x^2+100x+3=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

...3 funksiyaning eng

104. $x^2+100x+4=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

105. $x^2+100x+5=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

106. $x^2+100x+6=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

107. $x^2+100x+8=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

108. $x^2+100x+9=0$ kvadrat tenglama haqiqiy yechimlari $x^2+mx+n=0$ tenglama haqiqiy yechimlari kublariga teng. m^3-3mn ni toping.

A) 100 B) 81 C) 50 D) 110

109. $x^2+ax+5=0$, $x^2-5x-a=0$ tenglama faqat bitta umumiy haqiqiy yechimga ega bo`lsa, a ni toping

A) −5 **B) 6** C) 7 D) 5

110. $x^2+ax+3=0$, $x^2-3x-a=0$ tenglama faqat bitta umumiy haqiqiy yechimga ega bo`lsa, a ni toping

A) 3 **B) 4** C) 5 D) 6

111. $x^2+ax+2=0$, $x^2-2x-a=0$ tenglama faqat bitta umumiy haqiqiy yechimga ega bo`lsa, a ni toping

A) 3 B) 4 C) 7 D) 5

112. $x^2+ax+1=0$, $x^2-x-a=0$ tenglama faqat bitta umumiy haqiqiy yechimga ega bo`lsa, a ni toping

A) −5 **B) 2** C) 9 D) 1

113. $(a^2+b^2+1)x^2+2(a+b+1)x+3=0$ $2a-b=?$

A) 1 B) 2 C) 9 D) 7

114. $(a^2+b^2+9)x^2+2(a+b+3)x+3=0$ $a+b=?$

A) 1 B) 2 C) 9 **D) 6**

115. $(a^2+b^2+4)x^2+2(a+b+2)x+3=0$ tenglama haqiqiy yechimga ega bo`lsa, $a+b=?$

A) 1 B) 2 **C) 4** D) 6

116. $(a^2+b^2+4)x^2+2(a+b+2)x+3=0$ tenglama haqiqiy yechimga ega bo`lsa, $a-b=?$

A) 1 **B)0** C) 4 D) 6

117. $(a^2+b^2+4)x^2+2(a+b+2)x+3=0$ tenglama haqiqiy yechimga ega bo`lsa, $2a-b=?$

A) 1 **B) 2** C) 4 D) 6

118. $(a^2+b^2+4)x^2+2(a+b+2)x+3=0$ tenglama haqiqiy yechimga ega bo`lsa, $3a-b=?$

A) 4 B) 2 C) 1 D) 6

119. $2-3x+x^2=2(x-1)\sqrt{x}$ tenglamani yeching.

120. $x^2+x-2x\sqrt{x-2}-6=0$, tenglama ildizlari ko`paytmasini toping.

A) 4 **B) 6** C) 1 D) 4

120. $|x+3|\cdot(x-3)+a=0$, tenglamani 3ta haqiqiy ildizga ega bo`lgan butun qiymatlar yig`indisini toping.

A) 8 B) 6 C) 10 D) 4

19. $P(x)=9x^2+30x+25$ va $Q(x)=x^3+2x^2-3x+1$ ko'phadlar berilgan. $x=-2$ da $\frac{(P(x))^3+(Q(x))^3}{(P(x))^2-P(x)\cdot Q(x)+(Q(x))^2}+\frac{(P(x))^3-(Q(x))^3}{(P(x))^2+P(x)\cdot Q(x)+(Q(x))^2}$ ifodaning qiymatini toping

A) 2 B) 1 C) 8 D) 0

20. $P(x)=16x^2-8x+1$ va $Q(x)=x^3+5x^2-3x+2$ ko'phadlar berilgan. $x=-0{,}25$ da $\frac{(P(x))^3+(Q(x))^3}{(P(x))^2-P(x)\cdot Q(x)+(Q(x))^2}+\frac{(P(x))^3-(Q(x))^3}{(P(x))^2+P(x)\cdot Q(x)+(Q(x))^2}$ ifodaning qiymatini toping

A) 0 B) 2 C) 8 D) 18

21. Hisoblang: $1-2+3-4+5-6+\cdots+2015-2016+2017$

A) 1009 B) 1010 C) -1008 D) -1009

22. Hisoblang: $3-4+5-6+\cdots+2015-2016+2017$

A) 1010 B) 1009 C) -1008 D) -1010

23. Hisoblang: $5-6+7-8+9-10+\cdots+2015-2016+2017$

A) 1011 B) 1010 C) -1006) -1011

24. Hisoblang: $1-2+3-4+5-6+\cdots+2017-2018+2019$

A) 1010 B) 1009 C) -1009 D) -1010

25. Hisoblang: $3-4+5-6+\cdots+2017-2018+2019$

A) 1011 B) 1010 C) -1008 D) -1011

26. $-3a^2b^3c^5 2a^3c^2$d birhadning darajasini aniqlang.

A) 16 B) 5 C) 15 D) 7

27. $12a^5b^3c^5 2a^3c^2$d birhadning darajasini aniqlang.

A) 19 B) 8 C) 21 D) 7

28. $-27a^5b^3c^5 5a^3c^4$d birhadning darajasini

A) 21 B) 8 C) 19 D) 9

29. $-7a^5b^3c^2 25a^2c^4$d birhadning darajasini aniqlang.

A) 17 B) 7 C) 19 D) 6

30. $-17a^6b^3c^4 25a^2c^4$d birhadning darajasini aniqlang.

A) 20 B) 8 C) 19 D) 6

31. $5x^3y-2x^2yz^2-xyz$ ko'phadning darajasini aniqlang.

A) 5 B) 4 C) 3 D) 6

32. $-2x^3yz^3-x^2yz^3-4xyz$ ko'phadning darajasini aniqlang.

A) 7 B) 4 C) 3 D) 6

33. $-5x^2yz^3-x^2yz-4xyz$ ko'phadning darajasini aniqlang.

A) 6 B) 4 C) 3 D) 7

34. $12x^3y^2z^3-x^4yz^2-5xyz$ ko'phadning darajasini aniqlang.

A) 8 B) 4 C) 3 D) 7

35. $-22x^5yz-x^2yz^3-4xyz$ ko'phadning darajasini aniqlang.

A) 7 B) 3 C) 5 D) 6

36. a ning qanday qiymatida $P(x)=2x^{12}-ax^6+4x^3-3x^2+5x+1$ ko'phadning koeffitsiyentlari yig'indisi 7 ga teng bo'ladi.

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

37. a ning qanday qiymatida $P(x)=-2x^{12}-ax^6+4x^3-3x^2+5x+1$ ko'phadning koeffitsiyentlari yig'indisi 6 ga teng bo'ladi.

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

38. a ning qanday qiymatida $P(x)=2x^{12}-ax^6+4x^3-3x^2+5x+1$ ko'phadning koeffitsiyentlari yig'indisi 6 ga teng bo'ladi.

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

10. $\frac{2^5\cdot 11^8}{22^{10}}\cdot\frac{34^4\cdot 2057}{17^5}$ ni hisoblang.

A) 5 B) 1 C) 2 D) 4

39. a ning qanday qiymatida $P(x)=-4x^{12}-ax^6+4x^3-3x^2+5x+1$ ko'phadning koeffitsiyentlari yig'indisi 7 ga teng bo'ladi.

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

40. a ning qanday qiymatida $P(x)=3x^{12}-ax^6+4x^3-4x^2+5x+1$ ko'phadning koeffitsiyentlari yig'indisi 7 ga teng bo'ladi.

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

41. $P(x)=(3x-1)^{2017}\cdot(x-1)^{2016}+(4x-1)^2\cdot(6x-5)^2$ ko'phad koeffitsiyentlarining yig'indisini toping.

A) 9 B) $2^{2017}+1$ C) 16 D) $2^{2017}+3$

42. $P(x)=(3x-1)^{2017}\cdot(x-1)^{2016}+(5x-1)^2\cdot(6x-5)^2$ ko'phad koeffitsiyentlarining yig'indisini toping.

A) 16 B) $2^{2017}+1$ C) 9 D) $2^{2017}+3$

43. $P(x)=(3x-1)^{2017}\cdot(2x-1)^{2016}+(4x-3)^2\cdot(6x-5)^2$ ko'phad koeffitsiyentlarining yig'indisini toping.

A) $2^{2017}+1$ B) 9 C) 16 D) $2^{2017}+3$

44. $P(x)=(3x-1)^{2017}\cdot(2x-1)^{2016}+(4x-3)^2\cdot(6x-5)^2+2$ ko'phad koeffitsiyentlarining yig'indisini toping.

A) $2^{2017}+3$ B) 9 C) 16 D) $2^{2017}+1$

45. $P(x)=(3x-1)^{2017}\cdot(x-1)^{2016}+(4x-3)^2\cdot(6x-1)^2$ ko'phad koeffitsiyentlarining yig'indisini toping.

A) 25 B) $2^{2017}+3$ C) 16 D) $2^{2017}+1$

46. $P(x)=(3x+1)^{2017}\cdot(8x+1)^{2016}+(4x-1)^3\cdot(2x-1)^2+x+1$ ko'phadning ozod hadini toping.

A) 1 B) -1 C) 0 D) -2

47. $P(x)=(3x+1)^{2017}\cdot(8x+1)^{2016}+(4x-1)^3\cdot(2x-1)^2+x-1$ ko'phadning ozod hadini toping.

48. $P(x)=(3x+1)^{2017}\cdot(8x+1)^{2016}+(4x-1)^3\cdot(2x-1)^2+x$ ko'phadning ozod hadini toping.

A) 0 B) 1 C) -1 D) -2

49. $P(x)=(3x+1)^{2017}\cdot(8x+1)^{2016}+(4x-1)^3\cdot(2x-1)^2+x-2$ ko'phadning ozod hadini toping.

A) -2 B) 1 C) 0 D) -1

50. $P(x)=(3x+1)^{2017}\cdot(8x+1)^{2016}+(4x-1)^3\cdot(2x-1)^2+x+2$ ko'phadning ozod hadini toping.

A) 2 B) 1 C) 0 D) -2

51. $P(x)=(3x-1)^8\cdot(x-2)^4+7x$, $Q(x)=(2x-1)^{12}+4x^2$ ko'phadlar yig'indisining darajasini aniqlang.

A) 12 B) 16 C) 18 D) 14

52. $P(x)=(3x-1)^{14}\cdot(x-2)^2+7x$, $Q(x)=(2x-1)^{16}+4x^2$ ko'phadlar yig'indisining darajasini aniqlang.

A) 16 B) 12 C) 18 D) 14

53. $P(x)=(3x-1)^8\cdot(x-2)^{10}+7x$, $Q(x)=(2x-1)^{16}+4x^2$ ko'phadlar yig'indisining darajasini aniqlang.

A) 18 B) 16 C) 12 D) 14

54. $P(x)=(3x-1)^8\cdot(x-2)^6+7x$, $Q(x)=(2x-1)^{12}+4x^2$ ko'phadlar yig'indisining darajasini aniqlang.

A) 14 B) 16 C) 18 D) 12

55. $P(x)=(3x-1)^7\cdot(x-2)^4+7x$, $Q(x)=(2x-1)^{10}+4x^2$ ko'phadlar yig'indisining darajasini toping.

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

56. $(a+b)^5$ ko'phadning koeffitsiyentlar yig'indisini toping.

A) 32 B) 34 C) 16 D) 64

22. $\frac{0,(1)}{0,(5)}+\frac{0,(13)}{0,(65)}+\frac{0,(19)}{0,(95)}=0,(9)$

A) $-0,5$ B)$0,1$ C) $-0,2$ **D)** $\mathbf{-0,4}$

23. Taqqoslang: $a=\frac{7}{15}; b=\frac{9}{20}; c=\frac{8}{17}$

A) $\boldsymbol{c>a>b}$ B) $a>c>b$

C) $c>b>a$ D) $b>a>c$

24. Taqqoslang: $a=\frac{7}{15}; b=\frac{9}{20}; c=\frac{8}{17}$

A) $\boldsymbol{b<a<c}$ B) $b<c<a$

C) $a<b<c$ D) $c<a<b$

25: $\frac{\sqrt[3]{3}+\sqrt[3]{5}}{\sqrt[3]{5}-\sqrt[3]{3}}$ maxrajni irratsionallikdan ozod qiling.

A) $\mathbf{4+\sqrt[3]{75}+\sqrt[3]{45}}$ B) $4+\sqrt[3]{75}+\sqrt[3]{25}$

C) $4+\sqrt[3]{15}+\sqrt[3]{45}$ D) $2+\sqrt[3]{75}+\sqrt[3]{45}$

26. $\frac{1}{\sqrt{2}+\sqrt{3}}+\frac{1}{\sqrt{3}+\sqrt{4}}+\cdots+\frac{1}{\sqrt{2017}+\sqrt{2016}}$ ni hisoblang

A) $\sqrt{2017}-\sqrt{2}$ B) 1 C) $\sqrt{2017}-1$ D) 2

27. Hisoblang: $\frac{\sqrt{10}+\sqrt{20}-\sqrt{65}}{\sqrt{2}-\sqrt{13}+2}$

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

28. Hisoblang: $\frac{\sqrt{6}-\sqrt{12}-\sqrt{39}}{\sqrt{2}-\sqrt{13}+2}$

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

29. Hisoblang: $\frac{\sqrt{6}+\sqrt{12}-\sqrt{33}}{\sqrt{2}-\sqrt{11}+2}$

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

30. Agar $x+\frac{1}{x}=3$ bo'lsa, x^4-7x^2+4 ifodani qiymatini toping.

A) 3 B) 4 C) 5 D) 2

31. Agar $x+\frac{1}{x}=3$ bo'lsa, x^4-7x^2+5 ifodani qiymatini toping.

A) 4 B) 3 C) 5 D) 2

32. Agar $x+\frac{1}{x}=3$ bo'lsa, x^4-7x^2+6 ifodani qiymatini toping.

A) 5 B) 4 C) 3 D) 2

33. Agar $x+\frac{1}{x}=3$ bo'lsa, x^4-7x^2+3 ifodani qiymatini toping.

A) 2 B) 4 C) 5 D) 3

34. Agar $x+\frac{1}{x}=3$ bo'lsa, x^4-7x^2+7 ifodani qiymatini toping.

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

35. Agar $a-\frac{1}{a}=4$ bo'lsa, $a+\frac{1}{a}$ ni toping.

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

36. Agar $a-\frac{1}{a}=6$ bo'lsa, $a+\frac{1}{a}$ ni toping.

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

37. Agar $a-\frac{1}{a}=2\sqrt{2}$ bo'lsa, $a+\frac{1}{a}$ ni toping.

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

38. Agar $a-\frac{1}{a}=4\sqrt{2}$ bo'lsa, $a+\frac{1}{a}$ ni toping.

A) 6 B) 3 C) 12 D) 36

39. Agar $a-\frac{1}{a}=\sqrt{21}$ bo'lsa, $a+\frac{1}{a}$ ni toping.

A) 5 B) $\sqrt{5}$ C) 25 D) $2\sqrt{5}$

40. $\frac{8\sqrt{7}}{\sqrt{5\sqrt{7}-\sqrt{2\sqrt{7}}}}-\frac{4\sqrt{7}}{\sqrt{5\sqrt{7}+\sqrt{8\sqrt{7}}}}$ ni hisoblang.

A) $\mathbf{4\sqrt[4]{175}}$ B) $5\sqrt[4]{125}$ C) 2 D) $2\sqrt[4]{175}$

41. $\frac{5\sqrt{7}}{3\sqrt{3\sqrt{5}-4\sqrt{2\sqrt{5}}}}+\frac{4\sqrt{5}}{\sqrt{3\sqrt{5}-\sqrt{2\sqrt{5}}}}$ ni hisoblang

A) $\sqrt[4]{15}$ B) $\sqrt[4]{24}$ C) 2 D) $2\sqrt[4]{5}$

42. $\frac{2+\sqrt{3}}{\sqrt{2+\sqrt{2+\sqrt{3}}}}+\frac{2-\sqrt{3}}{\sqrt{2-\sqrt{2-\sqrt{3}}}}$ ni hisoblang

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

43. $\left(\frac{2+\sqrt{3}}{\sqrt{2+\sqrt{2+\sqrt{3}}}}+\frac{2-\sqrt{3}}{\sqrt{2-\sqrt{2-\sqrt{3}}}}\right)^{\frac{1}{2}}$ ni hisoblang

A) $\sqrt{2}$ B) $\sqrt{3}$ **C)** $\sqrt[4]{2}$ D) $\sqrt[4]{3}$

44. 18 ga karrali, 400 dan katta bo'lmagan barcha natural sonlar yig'indisini toping.

A) 4455 B) 3658 C) 5445 **D) 4554**

45. 19 ga karrali, 400 dan katta bo'lmagan barcha natural sonlar yig'indisini toping.

A) 4455 B) 3658 C) 5445 **D) 4389**

46. 17 ga karrali, 390 dan katta bo'lmagan barcha natural sonlar yig'indisini toping.

A) 4455 B) 3658 C) 5445 **D) 4301**

47. 13 ga karrali, 400 dan katta bo'lmagan barcha natural sonlar yig'indisini toping.

A) 6455 B) 5658 C) 5445 **D) 6045**

48. 15 ga karrali, 300 dan katta bo'lmagan barcha natural sonlar yig'indisini toping.

A) 4455 B) 3658 C) 3445 **D) 3150**

49. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 1-raqamini toping.

A) 3 B)1 **C) 7** D) 9

50. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 2-raqamini toping.

A) 3 B)1 C) 7 D) 9

51. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 5-raqamini toping.

A) 3 **B)1** C) 7 D) 9

52. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 3-raqamini toping.

A) 3 **B)1** C) 7 D) 9

53. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 4-raqamini toping.

A) 3 B)1 **C) 7** D) 9

54. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 6-raqamini toping.

A) 3 B)1 C) 7 **D) 9**

55. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 7-raqamini toping.

A) 3 B)1 **C) 2** D) 9

56. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 8-raqamini toping.

A) 3 B)1 C) 7 D) 9

57. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 9-raqamini toping.

A) 3 B)1 **C) 2** D) 9

58. Dastlabki 10 ta tub sonlar ketma-ket bir qatorda yozilib, 6 ta raqam shunday o'chirilganki, natijada eng kata son hosil bo'lgan. Shu sonning 10-raqamini toping.

A) 3 B)1 C) 7 **D) 9**

59. Raqamlari ko'paytmasining ikkilanganligiga teng bo'lgan ikki xonali sonni toping.

A) 36 B)24 C) 27 D) 45

60. Biror ikki xonali son va uning raqamlarini o'rnini almashtirib, ularni qo'shganda biror sonning kvadrati bo'ladigan barcha ikki xonali sonlarni toping.

A) 29, 38, 47, 56, 65, 74, 83, 92
B)29,39,49,59,69,74,83,94
C) 27,36,45,54,63,72,81,90
D) 25,34,43,52,61,70,77,86,95

61. Dastlabki 24 ta natural sonlar orasida nechtasi 2 yoki 3 ga karrali emas?

A) 12 **B)8** C) 7 D) 9