

## DEMO TEST (2)

1. Hisoblang:  $\left(\frac{1}{4}\right)^{-\frac{3}{2}} + 144^{\frac{1}{2}} : 9 + 27^{\frac{4}{3}} + \left(125^{\frac{5}{6}} \cdot 5\right)^0$

A)  $91\frac{1}{3}$    B)  $91\frac{2}{3}$    C)  $92\frac{1}{3}$    D)  $92\frac{2}{3}$

2. Tenglamani yeching:  $42,3 - (y - 6,5) = 21,4$

A) 27,4   B) 27,5   C) 28,4   D) 28,5

3. Tengsizlikni yeching:  $x^2 + 16x + 64 \leq 0$

A)  $(-\infty; 3,5)$    B) yechim yo'q   C)  $\{-8\}$    D)  $(-\infty; +\infty)$

4. Agar A, B, C va D sonlar  $2: 3: 4: 2\frac{3}{4}$  kabi nisbatda bo'lsa, u holda  $\frac{A+B}{C+D}$  ifodaning qiymatini aniqlang.

A)  $\frac{5}{9}$    B)  $\frac{9}{5}$    C)  $\frac{20}{27}$    D)  $\frac{27}{20}$

5.  $y = \frac{1}{2x+1}$  funksiya uchun teskari funksiyani toping.

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

6. Davriy funksiyani ko'rsating.

A)  $f(x) = 5tg3x$

B)  $f(x) = \cos x + \ln x - ctgx$

C)  $f(x) = 5 \cos 2x + 2x - 2$

D)  $f(x) = 5x + \cos x - e^x$

7. Arifmetik progressiyaning 3-hadini toping:  $a_8 = 50$ ,  $d = 6$

A) 20   B) 40   C) 16   D) 18

8. Geometrik progressiyada  $b_2 = 1$ ,  $q = \frac{1}{3}$  bo'lsa, u holda  $S$  yig'indisini toping.

A)  $\frac{9}{4}$

B)  $\frac{9}{2}$

C)  $\frac{3}{2}$

D) 3

9. To'g'ri to'rtburchakning bo'yi 25% ga uzaytirildi. Uning yuzasi o'zgarmasligi uchun enini necha foizga kamaytirish zarur?

A) 25   B) 26   C) 20   D) 24

10.  $y = x^2 + 12x + 23$  funksiya orqali berilgan parabolaning uchi koordinatalarining yig'indisini toping.

A) 19 B) -19 C) 78 D) -78

11. Tenglamani yeching:  $\frac{\log_3(x+7)+12}{7} = 2.$

A) 2 B) -2 C) 9 D) 16

12.  $-2 < \log_2(x-5) \leq 3$  tengsizlik nechta natural yechimga ega?

A) 4 B) 5 C) 7 D) 8

13. Hisoblang:  $\sin 2010^\circ.$

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

14. Ifodaning qiymatini toping:  $\operatorname{tg}\left(\pi + \arcsin \frac{1}{2}\right).$

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

15. To'g'ri burchakli uchburchak katetlarining gipotenuzadagi proeksiyalari mos ravishda 36 va 64 ga teng. Shu uchburchakka ichki chizilgan aylananing radiusini toping.

A) 15 B) 40 C) 60 D) 20

16.  $\frac{14,3^2 - 4,9^2}{7,1^2 - 2,3^2} = \frac{1,08 : 0,27}{x}$  proporsiyadan  $x$  ning qiymatini toping.

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

17. Integralni hisoblang:  $\int x \cos x dx.$

A)  $-x^2 \cos x + C$  B)  $\sin x + C$  C)  $\sin x + \cos x + C$  D)  $x \sin x + \cos x + C$

18. Uchburchakning ikki tomoni 2:3 nisbatda, uchinchi tomoni esa 40 ga teng. Uchunchi tomonga tushirilgan bissektrisaning shu tomonda ajratgan katta qismining uzunligini toping.

A) 25 B) 22 C) 24 D) 28

19. To'g'ri burchakli trapetsiyaning asoslari 10 va 13 ga hamda uning yuzi 46 ga teng. Trapetsiyaning perimetrini toping.

A) 32 B) 46 C) 27 D) 28

20. Agar qo'shni burchaklardan biri ikkinchisidan 4 marta katta bo'lsa, shu burchaklarni toping.  
A)  $160^\circ$  va  $40^\circ$  B)  $120^\circ$  va  $30^\circ$  C)  $144^\circ$  va  $36^\circ$  D)  $150^\circ$  va  $30^\circ$
21. Muntazam ko'pburchakning tashqi burchagi  $60^\circ$  ga teng bo'lib, uning perimetri 108 teng bo'lsa, uning katta diogonalining uzunligini toping.  
A) 24 B) 36 C) 28 D) 40
22. Ikki mergan nishonga qarata o'q uzmoqda. Birinchi merganning nishonga tekkizish ehtimoli 0,9 ga, ikkinchi merganniki esa 0,4 ga teng. Hech bo'lmaganda bitta merganning nishonga tekkizish ehtimolini toping.  
A) 0,81 B) 0,94 C) 0,16 D) 0,36
23. Parallelogrammning dioganallarining uzunligi 16 va 30 ga teng bo'lsa, uning tomonlari kvadratlarining yig'indisini toping.  
A) 900 B) 1296 C) 1156 D) 1024
24. Aylananing radiusi 15 sm ga teng. Markazdan 12 sm masofada turgan nuqtadan diametr va unga perpendikulyar vatar o'tkazilgan. Shu vatarning uzunligini toping.  
A) 24 B) 18 C) 21 D) 27
25. Tomonlari 2 va 4 ga teng bo'lgan to'g'ri to'rtburchak katta tomoni atrofida aylantirildi. Hosil bo'lgan aylanma jismning to'la sirtining yuzini toping.  
A)  $20\pi$  B)  $18\pi$  C)  $24\pi$  D)  $30\pi$