

Ixtisoslashtirilgan maktablarga kiruvchi o'quvchilar uchun

TEST SAVOLLAR KITOBI

DIQQAT!

Test topshiriqlarini yechishdan avval savollar kitobini, varaqlab unda 40 ta savol mavjudligini tekshiring. Agar savollar soni kamligi aniqlansa darhol kuzatuvchiga ma'lum qiling.

FANLAR:

Blok1: Matematika

Blok2: Fizika

Blok3: Ingliz tili

Toshkent 2022-y

1. Hisoblang: $\frac{(25^2-21^2)(25^2+21\cdot 25+21^2)}{25^3-21^3}$

- (a) 4
- (b) 46
- (c) 54
- (d) 36

2. k ning qanday qiymatida $4x - 15 = 5k - (1 - k)x$ tenglama yechimga ega bo'lmaydi?

- (a) 2
- (b) 3
- (c) 4
- (d) 5

3. Ikki velosipedchi bir yo'ldagi ikkita qishloqdan bir vaqtda bir xil yo'nalishda yo'lga chiqdi. Ikkinchi velosipedchi oldinda, birinchisi orqada bormoqda. Birinchi velosipedchining tezligi 15 km/h, ikkinchisniki esa 12 km/h. Agar qishloqlar orasidagi masofa 4,5 km bo'lsa, birinchi velosipedchi ikkinchisini qancha vaqtda quvib yetadi?

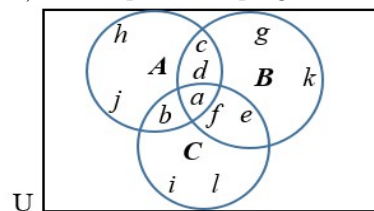
- (a) 1 soat 30 min
- (b) 1 soat 40 min
- (c) 1 soat 20 min
- (d) 1 soat 50 min

4. Birhadni standart shaklga keltiring:

$$-(-(a^3)^4) \cdot a^5 \cdot ((-a)^2)^3$$

- (a) $-a^{23}$
- (b) $-a^{17}$
- (c) a^{23}
- (d) a^{17}

5. A, B, C to'plamlar Venn diagrammasida tasvirlangan. Venn diagrammasidan foydalanib $(A \cup B) \cap C$ to'plamni toping.



- (a) $(A \cup B) \cap C = \{a, b, c, d, e, f\}$
- (b) $(A \cup B) \cap C = \{a, b, e, f\}$
- (c) $A \cap B \cap C = \{a, b, d, c, e, f, g, i, j, l, h, k\}$
- (d) $A \cap B \cap C = \{i, j\}$

6. Ko'phad ko'rinishiga keltiring: $(0, 2x + 0, 5y)(0, 04x^2 - 0, 1xy + 0, 25y^2)$

- (a) $0, 8x^3 + 12, 5y^3$
- (b) $0, 008x^3 - 0, 125y^3$
- (c) $0, 008x^3 + 0, 125y^3$
- (d) $0, 08x^3 + 1, 25y^3$

7. Quyidagi bog'lanishlarni to'g'ri yoki teskari proporsional bog'lanish ekanligini aniqlang.

1. Parallelepiped qirrasini va sirti yuzi orasidagi bog'lanish;
2. Harakat tezligi va ketgan vaqt orasidagi bog'lanish;
3. Doira radiusi va yuzi orasidagi bog'lanish;
4. Hovuz to'lishi uchun ketgan vaqt va suv hajmi orasidagi bog'lanish;

- (a) 1-to'g'ri proporsional, 2-teskari proporsional, 3-to'g'ri proporsional, 4-to'g'ri proporsional
- (b) 1-to'g'ri proporsional, 2-teskari proporsional, 3-proporsional emas, 4-to'g'ri proporsional
- (c) 1-to'g'ri proporsional, 2-teskari proporsional, 3-to'g'ri proporsional, 4-teskari proporsional
- (d) 1-to'g'ri proporsional, 2-proporsional emas, 3-to'g'ri proporsional, 4-teskari proporsional

8. $2a + 3b = 6$ va $4a^2 - 9b^2 = 54$ bo'lsa, $3b - 2a$ ning qiymatini toping.

- (a) -8
- (b) -9
- (c) 9
- (d) 8

9. $a + \frac{3}{a} = 5$ bo'lsa, $a^4 + \frac{81}{a^4}$ ning qiymatini toping.

- (a) 345
- (b) 343
- (c) 625
- (d) 619

10. Soddashtiring: $\left(\frac{2m+1}{2m-1} - \frac{2m-1}{2m+1}\right) : \frac{4m}{10m-5}$

- (a) $\frac{4}{2m+1}$
- (b) $\frac{10}{2m+1}$
- (c) $\frac{10}{2m-1}$
- (d) $\frac{4}{2m-1}$

11. Quyidagi tengliklarning to'g'ri yoki noto'g'riligi ketma-ketligi to'g'ri keltirilgan javob variantini toping

?	Tengliklar	ha	yo'q
1	$(5xy^2)^3 = 125x^3y^5$		
2	$(a+b)^2 - (a-b)^2 = 4ab$		
3	$(a+1)(a^2+1)(a^4+1) = a^8+1$		
4	$x^3 + 3x^2y + 3xy^2 + y^3 = (x+y)^3$		

- (a) 1-yo'q; 2-ha; 3-yo'q; 4-ha
- (b) 1-ha; 2-yo'q; 3-yo'q; 4-yo'q
- (c) 1-ha; 2-ha; 3-yo'q; 4-ha
- (d) 1-ha; 2-yo'q; 3-yo'q; 4-ha

12. 0, 3, 5, 7 raqamlaridan ularni takrorlamasdan nechta 3 xonali son tuzish mumkin?

- (a) 24
- (b) 16
- (c) 20
- (d) 18

13. Quyidagi mulohazalardan to'g'ri(T) yoki noto'g'ri(N) ekanligi to'g'ri ko'rsatilgan ketma-ketlikni aniqlang.

?	Mulohazalar	T	N
1	Bir to'g'ri burchakli uchburchakning gipotenuzasi va bitta o'tkir burchagi ikkinchi to'g'ri burchakli uchburchakning gipotenuzasi va bitta o'tkir burchagiga mos ravishda teng bo'lsa, bu uchburchaklar o'zaro teng bo'ladi.		
2	Uchburchakning tashqi burchaklari har doim o'tmas bo'ladi.		
3	To'g'ri burchakli uchburchakning kichik kateti gipotenuzaning yarmiga teng.		
4	Qirralari uzunliklari $a; b$ va c bo'lgan to'g'ri burchakli parallelepiped to'la sirtining yuzi $S_t = 2ab + 2ac + 2bc$ ga teng.		

- (a) 1 - to'g'ri, 2 - noto'g'ri, 3 - noto'g'ri, 4 - noto'g'ri;
- (b) 1 - to'g'ri, 2 - to'g'ri, 3 - to'g'ri, 4 - noto'g'ri;
- (c) 1 - to'g'ri, 2 - noto'g'ri, 3 - noto'g'ri, 4 - to'g'ri;
- (d) 1 - to'g'ri, 2 - to'g'ri, 3 - noto'g'ri, 4 - to'g'ri.

14. To'g'ri burchakli ABC uchburchakda A burchagi 30° . To'g'ri burchakli C uchidan gipotenuzaga CD balandlik o'tkazilgan. $BD = 6$ cm bo'lsa, AB gipotenuza uzunligini toping.

- (a) 30 cm
- (b) 24 cm
- (c) 28 cm
- (d) 18 cm

15. To'g'ri burchakli ABC uchburchakning to'g'ri burchagi uchidan CD mediana tushirilgan. Agar $\angle A = 24^\circ$ bo'lsa, CDB burchakni toping

- (a) 72°
- (b) 96°
- (c) 48°
- (d) 152°

16. Quyidagi berilgan yulduzning A qismidan boshlab B, C, M va N burchaklariga ketma-ket juft sonlar yozilgan. Yulduz ichidagi beshburchakning burchaklaridagi sonlar yig'indisi 170 ga teng bo'lsa, C burchakda qanday son yozilgan?

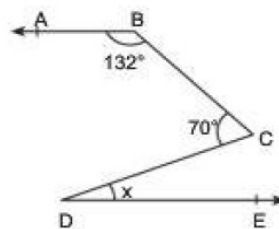


- (a) 24
- (b) 34
- (c) 28
- (d) 32

17. Perimetri 96 dm ga teng bo'lgan uchburchakning balandligi uni perimetrlari 48 dm va 80 dm ga teng bo'lgan uchburchaklarga ajratadi. Berilgan uchburchakning shu balandligini toping.

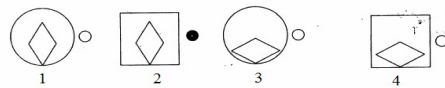
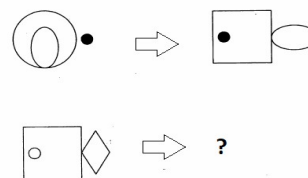
- (a) 16 dm
- (b) 18 dm
- (c) 12 dm
- (d) 8 dm

18. Berilgan chizmada $BA \parallel DE$, $\angle ABC = 132^\circ$, $\angle BCD = 70^\circ$. D burchak kattaligi x ni toping.



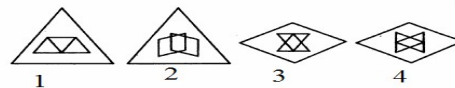
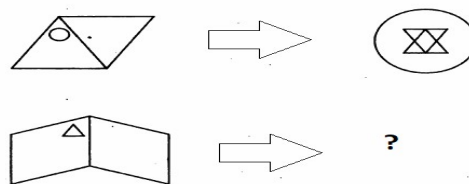
- (a) 62°
- (b) 31°
- (c) 35°
- (d) 22°

19. .




- (a) 3
- (b) 2
- (c) 1
- (d) 4

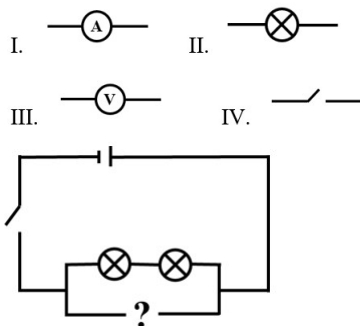
20. .



- (a) 2
- (b) 4
- (c) 3
- (d) 1

21. Jism qanday harakatlanganida, uning vazni (og'irligi) tinch turgandagi vaznidan kichikroq bo'ladi?
- pastga sekinlanuvchan
 - pastga tekis
 - pastga tezlanuvchan
 - yuqoriga tekis
22. Berilgan formulalar ichidan aylanma harakatda chiziqli tezlikni hisoblash formulalarini toping.
- $\vartheta = \omega \cdot R$
 - $\omega = \frac{\Delta\varphi}{\Delta t}$
 - $\vartheta = 2 \cdot \pi \cdot R \cdot \nu$
 - $\vartheta = a \cdot R$
 - $\vartheta = \frac{2 \cdot \pi}{T}$
- I, IV, V
 - faqat II
 - I, III
 - II, III, IV
23. Rasmda uchta moddiy nuqta bosib o'tgan yo'lining sarflangan vaqtga bog'lanish grafigi berilgan. Qaysi moddiy nuqtaning tezligi eng katta?
- 
- 2
 - 3
 - 1
 - hammasiniki bir hil
24. Avtomobil 4 km masofani bosib o'tishi uchun 12 minut vaqt sarfladi, keyingi 12 km uchun esa 18 minut. Ohirgi 14 km yo'lni 30 minutda o'tdi. Avtomobilning butun yo'ldagi o'rtacha tezligi nechiga teng?
- 30 m/s
 - 30 km/h
 - 2 km/h
 - 0,5 km/h
25. Ventilyator parragi 50 Hz chastota bilan aylanmoqda. Parrak radiusi 10 cm bo'lsa, parrak chetidagi nuqtalarning chiziqli tezligini aniqlang.
- 31,4 m/s
 - 62,8 m/s
 - 3,14 m/s
 - 6,28 m/s
26. Massasi 4 t bo'lgan avtobusning tezligi yo'lining to'g'ri chiziqli qismida 5 m/s dan 10 m/s gacha ortdi. Avtobus impulsining o'zgarishini toping ($kN \cdot s$).
- 10
 - 30
 - 40
 - 20
27. Massasi 1200 kg bo'lgan avtomobilni $0,3 \frac{m}{s^2}$ tezlanish bilan shatakka olganda, bikirligi 40 kN/m bo'lgan trosning qanchaga cho'zilishini toping. Ishqalanish kuchini hisobga olmang. (mm)
- 6
 - 3
 - 12
 - 9
28. Arqon ko'pi bilan 12 kg massali yukni ko'tara oladi. Shu arqon yordamida qanday massali yukni $2 \frac{m}{s^2}$ tezlanish bilan ko'tarish mumkin bo'ladi (kg)? $g=10 \frac{m}{s^2}$
- 10
 - 12
 - 6
 - 8

29. Rasmda elektr zanjir ko'rsatilgan. Zanjirning "?" belgisi qo'yilgan qismiga quyidagi qurilmalardan qaysilarini ulash mumkin?



- (a) I, II, III
 (b) I, III, IV
 (c) I, II, IV
 (d) II va III

30. Kamondan yuqoriga vertikal ravishda 30 m/s tezlik bilan otilgan o'qning massasi 50 g. Harakat boshlangandan keyin 2 s o'tganda o'qning kinetik va potensial energiyasi qanday bo'ladi (J)? $g=10$ N/kg

- (a) 2,5; 20
 (b) 0; 22,5
 (c) 20; 2,5
 (d) 6,5; 16

31. Read the text and answer the questions.

We all know that the law is there to protect citizens from injustice and illegal behaviour. We know we must obey the law because this is the basis for a civilised society, and most of us know without being told what is or should be legal or illegal. But what happens when the laws are so weird that we break them without even knowing it?

For example, in New York, you must buy a license in order to hang out clothes to dry or else you can get arrested! And in Carmel, New York again, a man can be arrested if his jacket and trousers are not of matching colours! Now, these laws are obviously relics of past times and nobody pays any attention to them, I guess, but what happens if you decide to take a lion to the cinema? Is that legal or not? (Not!)

Here's another crazy law. It is illegal to take off your clothes in the street in Montpelier, the capital city of Vermont, but it's ok if you walk in the streets naked - as long as you've removed your clothes before you go out in the streets! And in West Virginia, people are not allowed to own a red or black flag!

Now, for some of these crazy, bizarre laws, there can be an obvious, logical explanation. For instance, in Staten Island you can only water the grass in your garden if you're holding the hose (it helps you not to waste water), but most of them don't make sense nowadays any more. So why haven't they been changed? The answer is probably that most governments are too busy making new laws to spend time changing old, forgotten laws such as 'having a sleeping donkey in your bathtub after seven o'clock in the evening'!

Choose the right synonym to the word INJUSTICE.

- (a) legal
 (b) truth
 (c) right
 (d) wrong

32. Choose the right antonym to the word PROTECT.

- (a) keep
 (b) hurt
 (c) improve
 (d) defend

33. Complete the sentence with the correct answer:
"We know we must ... the law because this is the basis for a civilised society."
- (a) keep
 - (b) to be against
 - (c) listen to
 - (d) to obey
34. Complete the sentence with the correct answer:
"But what happens when the laws are so ... that we break them without even knowing it?"
- (a) normal
 - (b) usual
 - (c) ordinary
 - (d) strange
35. Complete the sentence with the correct answer:
"In West Virginia, people are not let a red or black flag!"
- (a) allow
 - (b) to wear
 - (c) to own
 - (d) have
36. Choose the correct answer. Find the correct heading for the text.
- (a) New York laws.
 - (b) What's the point?
 - (c) Odd laws!
 - (d) Laws that are illegal!
37. Complete the sentence with the correct answer:
"In ... you can walk in the street without your clothes on."
- (a) Montpellier
 - (b) New York
 - (c) Staten Island
 - (d) Carmel
38. Find the correct word to the definition:
"Take (something) away or off from the position."
- (a) protect
 - (b) put on
 - (c) remove
 - (d) go away
39. Find the correct Passive to the statement:
"You cannot water the grass in your garden without holding the hose".
- (a) Without holding the hose the grass cannot watered.
 - (b) The hose waters the grass.
 - (c) You cannot water the grass without the hose.
 - (d) The grass cannot be watered without holding the hose.
40. Find the false statements from the text.
- 1 It is not illegal to own a red or black flag in West Virginia.
 - 2 It is not legal to take off your clothes in the street in Vermont.
 - 3 You can water the grass in your garden without having the hose.
 - 4 It is illegal if you walk in the streets of Montpellier naked.
 - 5 It is not legal to take a lion to the cinema.
- (a) 4,5
 - (b) 1,3
 - (c) 1,4
 - (d) 2,5