

NORQULOV BAHRON UMAROVICH

# MATEMATIKA - RAQQAMLI IJOD

A logic puzzle interface on a yellow background. At the top right is a cartoon owl. The puzzle consists of a grid of numbers and empty slots. The numbers are arranged as follows:


At the bottom, there is a green checkmark on the left, a sequence of numbers 1 through 10 in a row, and a wooden door icon on the right with a green arrow pointing to it.

**B.U. NORQULOV**

# **MATEMATIKA- RAQAMLI IJOD**

**“TAFAKKUR” nashriyoti  
Toshkent – 2010 yil.**

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# KIRISH

**“Har bir bilimda qancha matematika bo‘lsa, unda shuncha haqiqat bor”.**

**Kvant** (fransuz matematigi)

Matematika inson aqlini mantiqiy fikrlashga undar ekan, undagi nuqsonlar va keraksiz fikrlarni bartaraf qilishga ham juda katta yordam beradi. Inson mantiqiy fikrlash orqali o‘ziga va o‘z faoliyatiga tanqidiy ravishda yondashish ko‘nikmasini shakllantiradi. Unda o‘z ishining oqibatini o‘ylash, vijdon amriga quloq solish, har bir hayotiy holatning yaxshi va yomon, foydali va zararli tomonlarini tarozi pallasiga qo‘yib ko‘rish kabi qobiliyatlar yaxshi rivojlanadi.

Ushbu qo‘llanmada buyuk matematiklarning hayotidagi qiziqarli voqealar, qadimiy masalalar arifmetik rebuslar, sofizmlar va qiziqarli masalalar jamlangan. Qo‘llanma maktab o‘quvchilari, kasb-hunar kollejlari va akademik litsey o‘quvchilarining bilimlarini chuqurlashtirish va mustahkamlashga yordam beradi.

Qiziqarli masalalar fikrlash jarayoniga hissiyot elementini kiritadi, shuning uchun ulardan dam olish paytlarida foydalanish yaxshi natija beradi.

Bu to‘plam o‘quvchilar bilan sinfdan tashqari, to‘garak mashg‘ulotlarida, darslarda, muammoli vaziyatlar hosil qilishda, yoshlarning matematikaga qiziqishlarini uyg‘otishga ozgina bo‘lsa ham xizmat qilsa muallif o‘z maqsadiga erishgan bo‘lar edi.

Mazkur o‘quv qo‘llanmani o‘qib chiqib, o‘zlarining qimmatli maslahatlarini bergan i.f.d. Z.Ya. Xudoyberdiyevga, i.f.n. S.M. Tadjiyevga, dotsent D.E. Norbekovga, t.f.n. R. Abdukarimovga, t.f.n. Ubaydulla Samad-Hoji og‘liga, shuningdek, uni kompyuterda tergan shogirdim Inoyatov S. ga o‘z minnatdorchili- gimni bildiraman.

Qo‘llanma haqida qimmatli vaqtini ayamay o‘z fikr va mulohazalarini bildirgan o‘quvchilarimga oldindan minnatdorchilik izhor qilaman.

*Muallif*

## MATEMATIKA DARSI

*Matematika qo‘yni to‘la sir bo‘ladi,  
Birga birni ko‘paytirsam bir bo‘ladi.  
Derazadan mo‘ralaydi olma shoxi,  
Ufqda bulut ertaga yomg‘ir bo‘ladi.*

*Matematika yomg‘irlarda chopgim kelur,  
Jumbog‘ingga men ham javob topgim kelur.  
Derazadan mo‘ralaydi bodom shoxi,  
Boqqa chiqib qo‘ng‘izlarni o‘pgim kelur.*

*Matematika men ham unga botgim kelur,  
O‘ylab -o‘ylab... o‘zingga tosh otgim kelur.  
Sen samolyot kashf etasan, mening esa  
Yalpiz bilan achomlashib yotgim kelur.*

*Matematika oy bo‘ladi, yil bo‘ladi,  
Tankni tankka ko‘paytirsam – kul bo‘ladi.  
Dunyo qachon bo‘ston bo‘lur, gul bo‘lur?  
Adabiyot o‘ylayverib sil bo‘ladi!*

*Matematika lov-lov yonib turgan cho‘g‘san,  
Sendan nima yasashlarin bilgan yo‘qsan.  
Derazadan mo‘ralaydi gilos shoxi,  
U qo‘ndog‘ing, o‘zing miltiq, o‘zing o‘qsan.*

*Matematika, qo‘yning to‘la sir bo‘ladi,  
Birni birga ko‘paytirsam bir bo‘ladi.  
Qovurg‘amning tagida bir qumri yig‘lar,  
Dokadan meni ayirsang – she‘r bo‘ladi!*

Muhammad Yusuf

... Aqlni takomillashtirmoq  
uchun yodlab olish emas, ko'proq  
fikir yurgizish kerak.

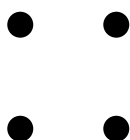
*Rene Dekart*

## MATEMATIK BOSHQOTIRMALAR

1. Yettita aylanani shunday joylashtiringki, natijada 12 ta 8 hosil bo'lsin.

2. 45 ta quyonni 9 ta katakka shunday joylashtiringki, natijada har katakdagi quyonlar soni har xil bo'lsin.

3. Keltirilgan 4 ta nuqtani 3 qismdan iborat bo'lgan yopiq chiziq bilan birlashtiring.



4. Gugurt cho'pidan noto'g'ri tenglik yozilgan. Bitta cho'pning joyini o'zgartirib to'g'ri tenglik hosil qiling.

$$\square + \square + \square = \square \square \square$$

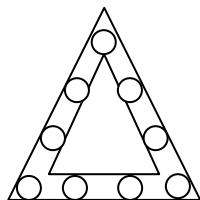
5. 10 ta daraxtni 5 qatorga 4 tadan ekish kerak. Qanday qilib ekish mumkin?

6. 1 dan 26 gacha bo'lgan natural sonlarni kataklarga shunday joylashtiringki, eni, bo'yi va diagonallar bo'yicha qo'shganda 65 soni hosil bo'lsin.

7. Atigi 2 ta to'g'ri chiziq chizish bilan yangi oy shaklini 6 ta bo'lakka bo'ling.



8.

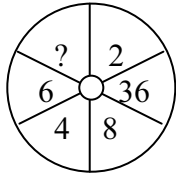


Uchburchak doirachalariga 9 ta raqamni shunday joylashtiringki, ularning har qaysi tomonidagi sonlar yig'indisi 20 ga teng bo'lsin.

9. Dekart koordinatalar tekisligida quyidagi nuqtalarni tog'ri belgilasangiz uy hayvonlaridan birining nomini bilib olasiz.

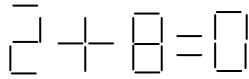
(14; -3), (6,5;0), (9;7), (2;9), (3;11), (3;13), (0;10), (-2;10), (-8;5,5), (-8;3), (-7;2), (-5;3), (-5;4,5), (0;4), (-2;0), (-2;-3), (-5;-1), (-7;-2), (-5;-1), (-2;-11), (-2;-8,5), (-4;-8), (-4;-4), (0;-7,5), (3;-5).

10.



Yetishmayotgan sonni toping. Bo'sh segmentga qaysi sonni qo'ysak bo'ladi?

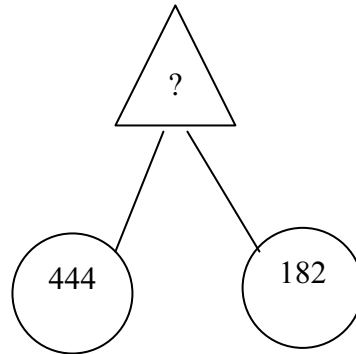
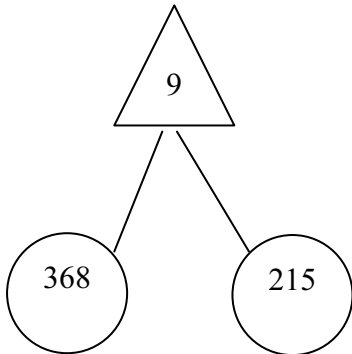
11.



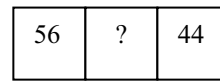
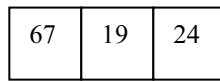
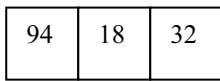
Berilgan noto'g'ri tenglikdan bitta cho'pni joyining almashtirish bilan to'g'ri tenglik hosil qiling.

**Quyidagi sonlarning joylashuvidagi qonuniyatni aniqlab, bo'sh kataklarni to'ldiring.**

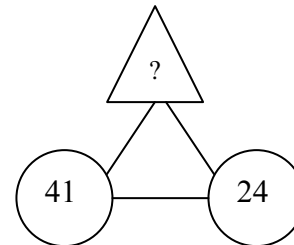
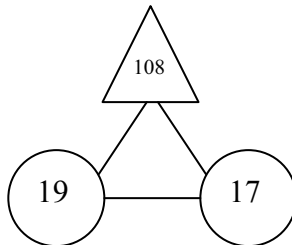
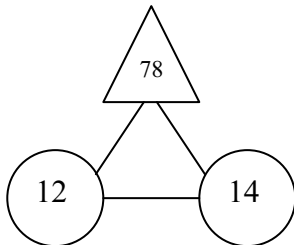
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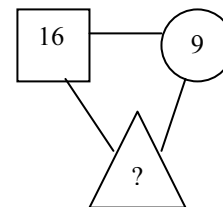
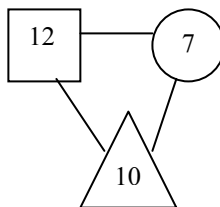
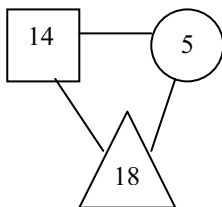
13.



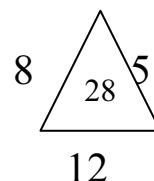
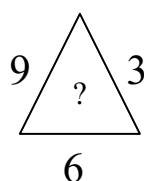
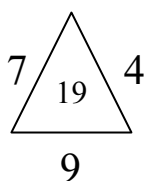
14.



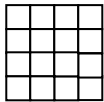
15.

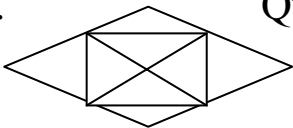


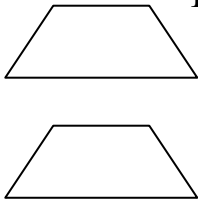
16.



17. 6 ta gugurt cho'pidan muntazam oltiburchak yasalgan. Hamma burchaklari o'tmas. 4ta cho'pni shunday almashtiringki, o'tkir burchakli uchburchaklar hosil bo'lsin.

18.  1 dan 17 gacha bo'lgan natural sonlarni bo'sh kataklarga shunday joylashtiringki eni, bo'yi va dioganallari bo'yicha qo'shganda 34 chiqsin.

19.  Quyida berilgan rasmda nechta uchburchak mavjud?

20.  Ikkita teng trapetsiyani shunday joylashtiringki, natijada to'rtta trapetsiya va bitta kvadrat hosil bo'lsin.

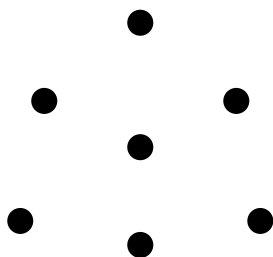
21. Sonlarning joylashuvidagi qonuniyatni aniqlab bo'sh kataklarni to'ldiring.

16	15	17	14	
32	33	31	34	

22. Gugurt cho'plaridan birining o'rnini shunday almashtiringki, natijada dastlabki sondan yetti marta kichik son hosil bo'lsin.

VII

23. Shunday uchta to'g'ri chiziq chizingki, har bir nuqta istalgan boshqa nuqtadan ajralib tursin.

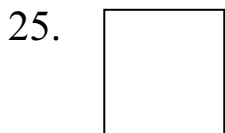




1	7	1
7		7
1	7	1

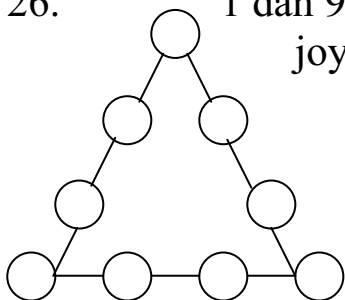
24. Bir boy chet eldan 32 shisha musallas olib keldi va ularni rasmda ko'rsatilgandek, ko'rinib turgan har bir chetki qatorga 9 tadan qilib yashikka joylab qo'ydi.

Xizmatkori may ichishni juda yaxshi ko'rar edi. Xizmatkor 3 safar kelib 4 shishadan musallasni ichib qo'ydi. Qolgan shishalarni har safar shunday terib qo'ydi, boy musallaslar kamayib borayotganini sezmedi. Xizmatkor shishalarni qanday qilib tergan?



Kvadratni shunday 5 ta to'g'ri to'rtburchakka bo'lingki, to'g'ri to'rtburchaklarning qo'shni tomonlari kesishmasin.

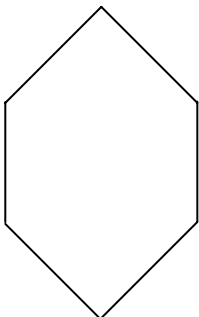
26.



1 dan 9 gacha sonlarni aylanachalarga shunday joylashtiringki, uchburchakning har tomonidagi aylana ichidagi sonlar yig'indisi 20 chiqsin.

27. Hovuzdan 4 va 9 litrli idishlar yordamida qanday qilib 6 litr suv olish mumkin?

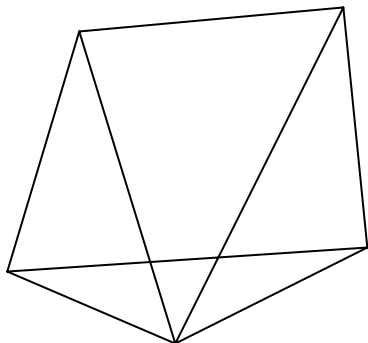
28.



Suratda ko'rsatilgan to'g'ri oltiburchakni 12 ta teng to'rtburchakka bo'la olasizmi?

29. Balandligi 10 m bo'lgan simyog'ochga shilliqqurt ko'tarilyapti. Shilliqqurt kunduzi 5 metr ko'tariladi, kechasi esa 4 m pastga tushadi. Necha kundan keyin shilliqqurt simyog'ochning uchiga chiqadi?

30. Rasmda nechta uchburchak tasvirlangan?





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