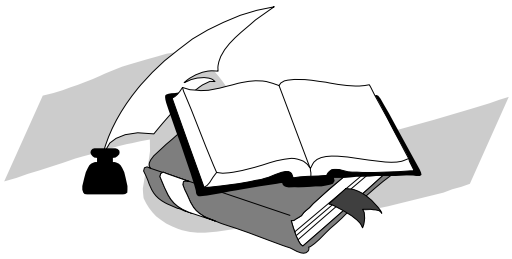
M.U.Valiyeva

Matematika fanidan tarqatma materiallar

USLUBIY QO'LLANMA



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Tuzuvchi: Valiyeva M.U. – Shayxontohur transport kasb-hunar kolleji matematika fani o'qituvchisi

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Maxmadiyorova D. - Toshkent iqtisodiyot kolleji matematika fani o'qituvchisi

Ushbu uslubiy qo'llanmada dars o'tishda foydalanadigan tarqatma materiallar majmuasi berilgan.Har bir dars boshida mustaqil ish sifatida quyidagi tarqatma materiallardan foydalanish maqsadga muvofiq.

Ushbu uslubiy qo'llanma Shayxontohur transport kasb-hunar kollejining ilmiy pedagogik kengashida tasdiqlangan.
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Kirish

O’zbekiston respublikasining " Ta'lim to’g’risidagi" qonuni, "Kadrlar tayyorlash milliy dasturi" va O’zbekiston Respublikasi Vazirlar Maxkamasining ta'lim sohasidagi qarori asosida zamon talablariga javob beradigan talabalar va kasb - hunar ta'limi mutaxasislarini tayyorlashga imkon yaratildi. Akademik litsey va kasb-hunar kollejlarida tahsil olayotgan talabalarni xayotga tayyorlash ular olgan nazariy bilimlarini amaliy mashg’ulotlar yordamida mustahkamlab borish bugungi kunning eng muhim talablaridan biridir.

O’qitish jarayonidagi doizarb masalalardan biri talim oluvchilarda fikriash qobilyatini rivojlantirish, egallagan bilimlaridan ijobiy foydalana bilish, xamda yangi bilimlarni mustaqil ravishda o’rgana olish qobiliyatini shakllantirishidir. O’quvchilarning ijodiy faoliyatini rivojlantirish uchun ular yangi bilimlami o’zlashtirish jarayonida faol ishtirok etishga erishish kerak.

Matematika darslarida yangi pedagogik texnologiyalar asosida o’qitish hozirgi kunning dolzarb masalalaridan hisoblanadi, lekin bu butun darsni turli xil o’yinlar bilan o’tkazish degani emas. Innavatsion metodlarni darsning biror qismida qo’llash o’quvchilarni mavzuga bo’lgan qiziqishini orttiradi, zerikishga yo’l qo’yilmaydi. Hozirgi vaqtda biz matematika darslarida yangi pedagogik texnologiyaning turli metodlarini qo’llab kelmoqdamiz.

Ta’lim –tarbiya jarayonining sifati va samaradorligini oshirish ko’p jihatdan ta’lim vositalari bilan qay darajada ta’minlanganligiga bog’liq bo’ladi.Ta’lim vositalaridan biri o’quvchilar bilan tarqatma materiallar yordamida ishlash.Bunda har bir o’quvchi o’zi mustaqil ishlaydi, tezroq misol, masala yechib baho olishga qiziqadi.

Ushbu qo’llanmada matematika fanining ba’zi bo’limlari uchun tayyorlangan tarqatma materiallardan namunalar keltirilgan.

Mavzu: Ratsional va irratsional ifodalar.

1-bilet 1. Algebraik kasrlarni qo'shing: $\frac{2x}{3(a-b)}+\frac{x}{a-b}$ 2. Ifodani soddalash-tiring: $\frac{a-b}{\sqrt{a}-\sqrt{b}}$	**2-bilet** 1.Algebraik kasrlarni ayiring: $\frac{2x}{3(a-b)}-\frac{x}{a-b}$ 2.Ifodani soddalash-tiring: $\frac{a-b}{\sqrt{a}+\sqrt{b}}$
3-bilet 1. Algebraik kasrlarni qo'shing: $\frac{7x}{2(x-1)}+\frac{5x}{x-1}$; 2. Qavslarni oching: $\left(\sqrt{a}+\sqrt{b}\right)^2$	**4-bilet** 1. Algebraik kasrlarni ayiring: $\frac{7x}{2(x-1)}-\frac{5x}{x-1}$; 2. Qavslarni oching: $\left(\sqrt{a}-\sqrt{b}\right)^2$
5-bilet 1. Algebraik kasrlarni qo'shing: $\frac{2a^2}{3(a+1)}+\frac{5a^2}{4(a+1)}$; 2. Qavslarni oching: $\left(\sqrt{a}+\sqrt{b}\right)^3$	**6-bilet** 1. Algebraik kasrlarni ayiring: $\frac{2a^2}{3(a+1)}-\frac{5a^2}{4(a+1)}$; 2. Qavslarni oching: $\left(\sqrt{a}-\sqrt{b}\right)^3$
7-bilet 1. Algebraik kasrlarni qo'shing: $\frac{4y}{5(y-3)}+\frac{5y}{2(y-3)}$; 2. Hisoblang: $\sqrt[3]{343\cdot 0{,}125}$	**8-bilet** 1. Algebraik kasrlarni ayiring: $\frac{4y}{5(y-3)}-\frac{5y}{2(y-3)}$; 2. Hisoblang: $\sqrt[3]{864\cdot 216}$

9-bilet	**10-bilet**
1. Algebraik kasrlarni qo'shing: $\frac{3x}{2(a-b)}+\frac{2x}{a-b}$ 2. Ifodani soddalashtiring: $\left(\sqrt[3]{x}\right)^6$	1.Algebraik kasrlarni ayiring: $\frac{3x}{2(a-b)}-\frac{2x}{a-b}$ 2.Ifodani soddalashtiring: $\left(\sqrt[3]{y^2}\right)^3$
11-bilet	**12-bilet**
1. Algebraik kasrlarni qo'shing: $\frac{3x}{4(x-1)}+\frac{5x}{x-1}$; 2. Hisoblang: $\sqrt[3]{\frac{64}{125}}$	1. Algebraik kasrlarni ayiring: $\frac{3x}{4(x-1)}-\frac{5x}{x-1}$; 2. Hisoblang: $\sqrt[4]{\frac{16}{81}}$
13-bilet	**14-bilet**
1. Algebraik kasrlarni qo'shing: $\frac{5a^2}{2(a+1)}+\frac{4a^2}{3(a+1)}$; 2. Hisoblang: $\sqrt[4]{324}:\sqrt[4]{4}$	1. Algebraik kasrlarni ayiring: $\frac{5a^2}{2(a+1)}+\frac{4a^2}{3(a+1)}$; 2. Hisoblang: $\sqrt[4]{324}\cdot\sqrt[4]{4}$
15-bilet	**16-bilet**
1. Algebraik kasrlarni qo'shing: $\frac{5y}{6(y-3)}+\frac{6y}{7(y-3)}$; 2. Hisoblang: $\sqrt[3]{64\cdot 125}$	1. Algebraik kasrlarni ayiring: $\frac{5y}{6(y-3)}-\frac{6y}{7(y-3)}$; 2. Hisoblang: $\sqrt[3]{27\cdot 216}$

Mavzu: Ko’phadlarni bo’lish

1-bilet	2-bilet
$f(x)=x^3+x^2+x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$	$f(x)=2x^3+2x^2+2x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$
3-bilet	**4-bilet**
$f(x)=3x^3+3x^2+3x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$	$f(x)=4x^3+4x^2+4x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$
5-bilet	**6-bilet**
$f(x)=5x^3+5x^2+5x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$	$f(x)=6x^3+6x^2+6x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$
7-bilet	**8-bilet**
$f(x)=7x^3+7x^2+7x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$	$f(x)=8x^3+8x^2+8x+1;$ $g(x)=x+1$ berilgan. $f(x):g(x)=?$

9-bilet	**10-bilet**
$f(x)=x^3+x^2+x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$	$f(x)=2x^3+2x^2+2x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$
11-bilet	**12-bilet**
$f(x)=3x^3+3x^2+3x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$	$f(x)=4x^3+4x^2+4x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$
13-bilet	**14-bilet**
$f(x)=5x^3+5x^2+5x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$	$f(x)=6x^3+6x^2+6x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$
15-bilet	**16-bilet**
$f(x)=7x^3+7x^2+7x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$	$f(x)=8x^3+8x^2+8x+1;$ $g(x)=x-1$ berilgan. $f(x):g(x)=?$

Mavzu: Kompleks sonlar va ular ustida amallar.

1-bilet Berilgan: a= 1+i va b=1-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**2-bilet** Berilgan: a= 2+i va b=2-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?
3-bilet Berilgan: a= 3+i va b=3-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**4-bilet** Berilgan: a= 4+i va b=4-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?
5-bilet Berilgan: a= 5+i va b=5-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**6-bilet** Berilgan: a= 6+i va b=6-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?
7-bilet Berilgan: a= 7+i va b=7-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**8-bilet** Berilgan: a= 8+i va b=8-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?

9-bilet Berilgan: a= 9+i va b=9-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**10-bilet** Berilgan: a= 10+i va b=10-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?
11-bilet Berilgan: a= 11+i va b=11-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**12-bilet** Berilgan: a= 12+i va b=12-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?
13-bilet Berilgan: a= 13+i va b=13-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**14-bilet** Berilgan: a= 14+i va b=14-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?
15-bilet Berilgan: a= 15+i va b=15-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?	**16-bilet** Berilgan: a= 16+i va b=16-i 1) a+b=? 2) a-b=? 3) ab=? 4) a:b=?

Mavzu:
Chiziqli tenglamani yechish.

1-bilet	**2-bilet**
Tenglamani yeching: 1. $5x=\left(\frac{5}{7}\right)^2$; 2. 25x-1=9	Tenglamani yeching: 1. $4x=-\left(\frac{4}{5}\right)^2$; 2. 7x+8=11
3-bilet	**4-bilet**
Tenglamani yeching: 1. $-0,1x=10^3$; 2. 3x-5=10-x	Tenglamani yeching: 1. $-0,3x=-10^2$; 2. 4x+4=x+5
5-bilet	**6-bilet**
Tenglamani yeching: 1. 5x+3(3x+7)=35 2. 8y-9-4y+5=12y-4-5y	Tenglamani yeching: 1. 8x-(7x+8)=9 2. 4+8y+8=2y-10-7y+9
7-bilet	**8-bilet**
Tenglamani yeching: 1. 0,71x+1,98=0,37x-1,76 2. 0,18y-7,4=0,05y-5,71	Tenglamani yeching: 1. 5(5x-1)-2,7x+0,2x=6,5-0,5x 2. 0,36x-0,6=0,3(0,4x-1,2)

9-bilet	**10-bilet**
Tenglamani yeching: 1.25x=$\left(\frac{5}{7}\right)^2$; 2.25x-10=40	Tenglamani yeching: 1.4x=$\left(\frac{4}{5}\right)^2$; 2.7x+8=15
11-bilet	**12-bilet**
Tenglamani yeching: 1.0,1x=10^3; 2.5x-5=10-2x	Tenglamani yeching: 1.0,3x=10^2; 2.4x+4=x+5
13-bilet	**14-bilet**
Tenglamani yeching: 1.4x+3(3x+7)=40 2. 7y-6-4y+5=13y-4-5y	Tenglamani yeching: 1. 8x-(7x+8)=9 2. 4+8y+8=2y-10-7y+9
15-bilet	**16-bilet**
Tenglamani yeching: 1. 1,71x+2,98=1,37x-1,76 2. 1,18y-7,4=1,05y-1,71	Tenglamani yeching: 1.5x-1-1,7x+0,2x=4,5-2,5x 2.1,36x-1,6=0,4x-1,2

Mavzu: Ayqash to’g’ri chiziqlar orasidagi masofa.

1-bilet Ayqash to’g’ri chiziqlar deb qanday to’g’ri chiziqqa aytiladi?	**2-bilet** Ayqash to’g’ri chiziqlarni tekislikda tasvirlab bering.
3-bilet Ayqash to’g’ri chiziqlarning umumiy perpendilkuiyari deb nimaga aytiladi?	**4-bilet** Ayqash to’g’ri chiziqlar bitta va faqat bitta umumiy perpendikulyarga ega ekanini isbotlang.
5-bilet Ayqash to’g’ri chiziqlar orasidagi masofa nima?	**6-bilet** Ayqash to’g’ri chiziqlar orqali o’tuvchi tekislikni tasvirlab bering.
7-bilet Ayqash to’g’ri chiziqlar orqali tekisliklar qanday o’tkaziladi?	**8-bilet** Qanday tekisliklar perpendikulyar tekislkiklar deyiladi?

9-bilet Ayqash to’g’ri chiziqlar deb qanday to’g’ri chiziqqa aytiladi?	**10-bilet** Ayqash to’g’ri chiziqlarni tekislikda tasvirlab bering.
11-bilet Ayqash to’g’ri chiziqlarning umumiy perpendilkuiyari deb nimaga aytiladi?	**12-bilet** Ayqash to’g’ri chiziqlar bitta va faqat bitta umumiy perpendikulyarga ega ekanini isbotlang.
13-bilet Ayqash to’g’ri chiziqlar orasidagi masofa nima?	**14-bilet** Ayqash to’g’ri chiziqlar orqali o’tuvchi tekislikni tasvirlab bering.
15-bilet Ayqash to’g’ri chiziqlar orqali tekisliklar qanday o’tkaziladi?	**16-bilet** Qanday tekisliklar perpendikulyar tekislkiklar deyiladi?

Mavzu: Proporsiya.

1-bilet Proporsiyaning noma'lum hadini toping: 1. x:25=50:120 2. 60:x=128:4	**2-bilet** Proporsiyaning noma'lum hadini toping: 1. x:25=40:12 2. 70:x=120:4
3-bilet Proporsiyaning noma'lum hadini toping: 1. x:25=50:100 2. 60:x=128:42	**4-bilet** Proporsiyaning noma'lum hadini toping: 1. x:25=40:80 2. 50:x=100:4
5-bilet Proporsiyaning noma'lum hadini toping: 1. 2x:25=50:100 2. 60:2x=120:4	**6-bilet** Proporsiyaning noma'lum hadini toping: 1. 3x:25=120:12 2. 7:2x=120:5
7-bilet Proporsiyaning noma'lum hadini toping: 1. 3x:25=75:100 2. 60:3x=120:5	**8-bilet** Proporsiyaning noma'lum hadini toping: 1. 5x:25=100:20 2. 50:5x=100:25

9-bilet Proporsiyaning noma'lum hadini toping: 1. x:25=60:120 2. 60:x=120:2	**10-bilet** Proporsiyaning noma'lum hadini toping: 1. x:25=140:14 2. 50:x=100:400
11-bilet Proporsiyaning noma'lum hadini toping: 1. 2x:25=50:100 2. 60:2x=128:42	**12-bilet** Proporsiyaning noma'lum hadini toping: 1. 2x:25=40:80 2. 50:2x=100:4
13-bilet Proporsiyaning noma'lum hadini toping: 1. 3x:25=60:100 2. 60:4x=120:4	**14-bilet** Proporsiyaning noma'lum hadini toping: 1. 5x:25=120:12 2. 7:5x=120:5
15-bilet Proporsiyaning noma'lum hadini toping: 1. 5x:25=75:100 2. 60:5x=120:5	**16-bilet** Proporsiyaning noma'lum hadini toping: 1. 5x:125=100:20 2. 50:15x=100:25

Mavzu:
Protsent haqida tushuncha.

1-bilet	**2-bilet**
1. 110 ning 12 %ini toping; 2. 10 % i 5 ga teng bo'lgan sonni toping.	1. 120 ning 12 %ini toping; 2. 20 % i 5 ga teng bo'lgan sonni toping.
3-bilet	**4-bilet**
1. 130 ning 12 %ini toping; 2. 30 % i 5 ga teng bo'lgan sonni toping.	1. 140 ning 12 %ini toping; 2. 40 % i 5 ga teng bo'lgan sonni toping.
5-bilet	**6-bilet**
1. 150 ning 12 %ini toping; 2. 50 % i 5 ga teng bo'lgan sonni toping.	1. 160 ning 12 %ini toping; 2. 60 % i 5 ga teng bo'lgan sonni toping.
7-bilet	**8-bilet**
1. 170 ning 12 %ini toping; 2. 70 % i 5 ga teng bo'lgan sonni toping.	1. 180 ning 12 %ini toping; 2. 80 % i 5 ga teng bo'lgan sonni toping.

9-bilet	**10-bilet**
1. 110 ning 2 %ini toping; 2. 10 % i 15 ga teng bo'lgan sonni toping.	1. 120 ning 2 %ini toping; 2. 20 % i 15 ga teng bo'lgan sonni toping.
11-bilet	**12-bilet**
1. 130 ning 2 %ini toping; 2. 30 % i 15 ga teng bo'lgan sonni toping.	1. 140 ning 2 %ini toping; 2. 40 % i 15 ga teng bo'lgan sonni toping.
13-bilet	**14-bilet**
1. 150 ning 2 %ini toping; 2. 50 % i 15 ga teng bo'lgan sonni toping.	1. 160 ning 2 %ini toping; 2. 60 % i 15 ga teng bo'lgan sonni toping.
15-bilet	**16-bilet**
1. 170 ning 2 %ini toping; 2. 70 % i 15 ga teng bo'lgan sonni toping.	1. 180 ning 2 %ini toping; 2. 80 % i 15 ga teng bo'lgan sonni toping.

Mavzu:
Kvadrat tenglama

1-bilet Kvadrat tenglamalarni yeching: 1. $x^2-x=0$; 2. $2x^2-6x+4=0$	**2-bilet** Kvadrat tenglamalarni yeching: 1. $2x^2-x=0$; 2. $2x^2-8x+6=0$
3-bilet Kvadrat tenglamalarni yeching: 1. $3x^2-x=0$; 2. $2x^2-10x+8=0$	**4-bilet** Kvadrat tenglamalarni yeching: 1. $4x^2-x=0$; 2. $2x^2-12x+10=0$
5-bilet Kvadrat tenglamalarni yeching: 1. $5x^2-x=0$; 2. $2x^2-14x+12=0$	**6-bilet** Kvadrat tenglamalarni yeching: 1. $6x^2-x=0$; 2. $2x^2-16x+14=0$
7-bilet Kvadrat tenglamalarni yeching: 1. $7x^2-x=0$; 2. $2x^2-18x+16=0$	**8-bilet** Kvadrat tenglamalarni yeching: 1. $8x^2-x=0$; 2. $2x^2-20x+18=0$

9-bilet	**10-bilet**
Kvadrat tenglamalarni yeching: 1. $x^2+x=0$; 2. $2x^2+6x+4=0$	Kvadrat tenglamalarni yeching: 1. $2x^2+x=0$; 2. $2x^2+8x+6=0$
11-bilet	**12-bilet**
Kvadrat tenglamalarni yeching: 1. $3x^2+x=0$; 2. $2x^2+10x+8=0$	Kvadrat tenglamalarni yeching: 1. $4x^2+x=0$; 2. $2x^2+12x+10=0$
13-bilet	**14-bilet**
Kvadrat tenglamalarni yeching: 1. $5x^2+x=0$; 2. $2x^2+14x+12=0$	Kvadrat tenglamalarni yeching: 1. $6x^2+x=0$; 2. $2x^2+16x+14=0$
15-bilet	**16-bilet**
Kvadrat tenglamalarni yeching: 1. $7x^2+x=0$; 2. $2x^2+18x+16=0$	Kvadrat tenglamalarni yeching: 1. $8x^2+x=0$; 2. $2x^2+20x+18=0$

Mavzu:
Ikki nuqta orasidagi masofa.

1-bilet A(1;-2;8) va B(0;1;6) nuqtalar orasidagi masofani toping.	**2-bilet** A(-1;-2;8) va B(0;1;-6) nuqtalar orasidagi masofani toping.
3-bilet A(-1;-2;4) va B(0;1;-6) nuqtalar orasidagi masofani toping.	**4-bilet** A(-1;-2;4) va B(0;5;-6) nuqtalar orasidagi masofani toping.
5-bilet A(1;-2;8) va B(10;1;6) nuqtalar orasidagi masofani toping.	**6-bilet** A(-11;-2;8) va B(0;1;-6) nuqtalar orasidagi masofani toping.
7-bilet A(-1;-12;4) va B(0;1;-6) nuqtalar orasidagi masofani toping.	**8-bilet** A(-1;-2;4) va B(0;15;-6) nuqtalar orasidagi masofani toping.

9-bilet A(1;-2;4) va B(5;1;6) nuqtalar orasidagi masofani toping.	**10-bilet** A(-1;-2;18) va B(0;1;-6) nuqtalar orasidagi masofani toping.
11-bilet A(-1;-2;4) va B(0;-1;-6) nuqtalar orasidagi masofani toping.	**12-bilet** A(-1;-2;4) va B(0;5;6) nuqtalar orasidagi masofani toping.
13-bilet A(11;-2;8) va B(10;1;6) nuqtalar orasidagi masofani toping.	**14-bilet** A(1;-2;8) va B(0;1;-6) nuqtalar orasidagi masofani toping.
15-bilet A(-1;-12;4) va B(0;-1;6) nuqtalar orasidagi masofani toping.	**16-bilet** A(-1;-2;-4) va B(0;15;-6) nuqtalar orasidagi masofani toping.

Mavzu:
Keltirilgan kvadrat tenglama.

1-bilet Kvadrat tenglamalarni yeching: $x^2-2x+1=0$	**2-bilet** Kvadrat tenglamalarni yeching: $x^2-3x+2=0$
3-bilet Kvadrat tenglamalarni yeching: $x^2-4x+3=0$	**4-bilet** Kvadrat tenglamalarni yeching: $x^2-5x+4=0$
5-bilet Kvadrat tenglamalarni yeching: $x^2-6x+5=0$	**6-bilet** Kvadrat tenglamalarni yeching: $x^2-7x+6=0$
7-bilet Kvadrat tenglamalarni yeching: $x^2-8x+7=0$	**8-bilet** Kvadrat tenglamalarni yeching: $x^2-9x+8=0$

9-bilet Kvadrat tenglamalarni yeching: $x^2+2x+1=0$	**10-bilet** Kvadrat tenglamalarni yeching: $x^2+3x+2=0$
11-bilet Kvadrat tenglamalarni yeching: $x^2+4x+3=0$	**12-bilet** Kvadrat tenglamalarni yeching: $x^2+5x+4=0$
13-bilet Kvadrat tenglamalarni yeching: $x^2+6x+5=0$	**14-bilet** Kvadrat tenglamalarni yeching: $x^2+7x+6=0$
15-bilet Kvadrat tenglamalarni yeching: $x^2+8x+7=0$	**16-bilet** Kvadrat tenglamalarni yeching: $x^2+9x+8=0$

Mavzu:
Bikvadrat tenglama.

1-bilet Kvadrat tenglamalarni yeching: $x^4-2x^2+1=0$	**2-bilet** Kvadrat tenglamalarni yeching: $x^4-3x^2+2=0$
3-bilet Kvadrat tenglamalarni yeching: $x^4-4x^2+3=0$	**4-bilet** Kvadrat tenglamalarni yeching: $x^4-5x^2+4=0$
5-bilet Kvadrat tenglamalarni yeching: $x^4-6x^2+5=0$	**6-bilet** Kvadrat tenglamalarni yeching: $x^4-7x^2+6=0$
7-bilet Kvadrat tenglamalarni yeching: $x^4-8x^2+7=0$	**8-bilet** Kvadrat tenglamalarni yeching: $x^4-9x^2+8=0$

9-bilet Kvadrat tenglamalarni yeching: $x^4+2x^2+1=0$	**10-bilet** Kvadrat tenglamalarni yeching: $x^4+3x^2+2=0$
11-bilet Kvadrat tenglamalarni yeching: $x^4+4x^2+3=0$	**12-bilet** Kvadrat tenglamalarni yeching: $x^4+5x^2+4=0$
13-bilet Kvadrat tenglamalarni yeching: $x^4+6x^2+5=0$	**14-bilet** Kvadrat tenglamalarni yeching: $x^4+7x^2+6=0$
15-bilet Kvadrat tenglamalarni yeching: $x^4+8x^2+7=0$	**16-bilet** Kvadrat tenglamalarni yeching: $x^4+9x^2+8=0$

Mavzu:
Kvadrat tengsizlik.

1-bilet Kvadrat tengsizliklarni yeching: $x^2+2x+1>0$	**2-bilet** Kvadrat tengsizliklarni yeching: $x^2+3x+2>0$
3-bilet Kvadrat tengsizliklarni yeching: $x^2+4x+3>0$	**4-bilet** Kvadrat tengsizliklarni yeching: $x^2+5x+4>0$
5-bilet Kvadrat tengsizliklarni yeching: $x^2+6x+5>0$	**6-bilet** Kvadrat tengsizliklarni yeching: $x^2+7x+6>0$
7-bilet Kvadrat tengsizliklarni yeching: $x^2+8x+7>0$	**8-bilet** Kvadrat tengsizliklarni yeching: $x^2+9x+8>0$

9-bilet Kvadrat tengsizliklarni yeching: $x^2+2x+1<0$	**10-bilet** Kvadrat tengsizliklarni yeching: $x^2+3x+2<0$
11-bilet Kvadrat tengsizliklarni yeching: $x^2+4x+3<0$	**12-bilet** Kvadrat tengsizliklarni yeching: $x^2+5x+4<0$
13-bilet Kvadrat tengsizliklarni yeching: $x^2+6x+5<0$	**14-bilet** Kvadrat tengsizliklarni yeching: $x^2+7x+6<0$
15-bilet Kvadrat tengsizliklarni yeching: $x^2+8x+7<0$	**16-bilet** Kvadrat tengsizliklarni yeching: $x^2+9x+8<0$

Mavzu:
Ratsional va irratsional tenglamalar.

1-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=1$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=1$	**2-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=2$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=2$
3-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=3$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=3$	**4-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=4$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=4$
5-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=5$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=5$	**6-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=6$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=6$
7-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=7$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=7$	**8-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=8$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=8$

9-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=9;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=9$	**10-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=10;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=10$
11-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=11;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=11$	**12-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=12;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=12$
13-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=13;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=13$	**14-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=14;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=14$
15-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=15;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=15$	**16-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}=16;$ 2.Irratsional tenglamani yeching: $\sqrt{2x+1}=16$

Mavzu:
Vektor koordinatalari. Vektorlar ustida amallar.

1-bilet a(1;2;3) va b(4;5;9) vektorlarni qo'shing.	**2-bilet** a(1;-2;3) va b(4;5;9) vektorlarni qo'shing.
3-bilet a(1;2;-3) va b(4;5;9) vektorlarni qo'shing.	**4-bilet** a(1;-2;3) va b(4;5;-9) vektorlarni qo'shing.
5-bilet a(-1;2;3) va b(4;5;9) vektorlarni qo'shing.	**6-bilet** a(1;-2;3) va b(-4;5;9) vektorlarni qo'shing.
7-bilet a(1;2;-3) va b(4;5;-9) vektorlarni qo'shing.	**8-bilet** a(1;-2;-3) va b(4;5;-9) vektorlarni qo'shing.

9-bilet a(1;2;3) va b(4;5;9) vektorlarni ayiring.	**10-bilet** a(1;-2;3) va b(4;5;9) vektorlarni ayiring.
11-bilet a(1;2;-3) va b(4;5;9) vektorlarni ayiring.	**12-bilet** a(1;-2;3) va b(4;5;-9) vektorlarni ayiring.
13-bilet a(-1;2;3) va b(4;5;9) vektorlarni ayiring.	**14-bilet** a(1;-2;3) va b(-4;5;9) vektorlarni ayiring.
15-bilet a(1;2;-3) va b(4;5;-9) vektorlarni ayiring.	**16-bilet** a(1;-2;-3) va b(4;5;-9) vektorlarni qo’shing.

Mavzu:
Ratsional va irratsional tengsizliklar.

1-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<1$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<1$	**2-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<2$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<2$
3-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<3$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<3$	**4-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<4$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<4$
5-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<5$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<5$	**6-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<6$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<6$
7-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<7$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<7$	**8-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<8$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<8$

9-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<9$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<9$	**10-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<10$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<10$
11-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<11$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<11$	**12-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<12$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<12$
13-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<13$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<13$	**14-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<14$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<14$
15-bilet 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<15$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<15$	**16-bilet** 1.Ratsional tenglamani yeching: $\frac{2x}{x+1}<16$; 2.Irratsional tenglamani yeching: $\sqrt{2x+1}<16$

Mavzu:
Algebraik tenglamalar siatemasi.

1-bilet Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=5 \\ x-y=1 \end{cases}$	**2-bilet** Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=6 \\ x-y=2 \end{cases}$
3-bilet Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=7 \\ x-y=3 \end{cases}$	**4-bilet** Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=8 \\ x-y=4 \end{cases}$
5-bilet Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=9 \\ x-y=5 \end{cases}$	**6-bilet** Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=10 \\ x-y=6 \end{cases}$
7-bilet Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=11 \\ x-y=7 \end{cases}$	**8-bilet** Tenglamalar sitemasini qo'shish usuli bilan yeching: $\begin{cases} x+y=12 \\ x-y=8 \end{cases}$

9-bilet Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=5 \\ x-y=1 \end{cases}$	**10-bilet** Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=6 \\ x-y=2 \end{cases}$
11-bilet Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=7 \\ x-y=3 \end{cases}$	**12-bilet** Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=8 \\ x-y=4 \end{cases}$
13-bilet Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=9 \\ x-y=5 \end{cases}$	**14-bilet** Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=10 \\ x-y=6 \end{cases}$
15-bilet Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=11 \\ x-y=7 \end{cases}$	**16-bilet** Tenglamalar sitemasini o’rniga qo’yish usuli bilan yeching: $\begin{cases} x+y=12 \\ x-y=8 \end{cases}$

Mavzu:
Kramer usuli.

1-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=5 \\ x-y=1 \end{cases}$	**2-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=6 \\ x-y=2 \end{cases}$
3-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=7 \\ x-y=3 \end{cases}$	**4-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=8 \\ x-y=4 \end{cases}$
5-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=9 \\ x-y=5 \end{cases}$	**6-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=10 \\ x-y=6 \end{cases}$
7-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=11 \\ x-y=7 \end{cases}$	**8-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=12 \\ x-y=8 \end{cases}$

9-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=5 \\ x-y=1 \end{cases}$	**10-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=6 \\ x-y=2 \end{cases}$
11-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=7 \\ x-y=3 \end{cases}$	**12-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=8 \\ x-y=4 \end{cases}$
13-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=9 \\ x-y=5 \end{cases}$	**14-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=10 \\ x-y=6 \end{cases}$
15-bilet Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=11 \\ x-y=7 \end{cases}$	**16-bilet** Tenglamalar sitemasini Kramer usuli bilan yeching: $\begin{cases} x+y=12 \\ x-y=8 \end{cases}$

Mavzu:
Vektorlarning skalyar ko’paytmasi.

1-bilet Quyidigi vektorlarni skalyar ko’paytiring: a(4;5;8) va b(-1;5;9)	**2-bilet** Quyidigi vektorlarni skalyar ko’paytiring: a(1;5;8) va b(-1;5;9)
3-bilet Quyidigi vektorlarni skalyar ko’paytiring: a(2;5;8) va b(-1;5;9)	**4-bilet** Quyidigi vektorlarni skalyar ko’paytiring: a(3;5;8) va b(-1;5;9)
5-bilet Quyidigi vektorlarni skalyar ko’paytiring: a(6;5;8) va b(-1;5;9)	**6-bilet** Quyidigi vaktorlarni skalyar ko’paytiring: a(1;5;8) va b(-2;5;9)
7-bilet Quyidigi vaktorlarni skalyar ko’paytiring: a(2;5;8) va b(-3;5;9)	**8-bilet** Quyidigi vaktorlarni skalyar ko’paytiring: a(3;5;8) va b(-4;5;9)

9-bilet Quyidigi vektorlarni skalyar ko’paytiring: a(4;5;8) va b(-1;5;1)	**10-bilet** Quyidigi vektorlarni skalyar ko’paytiring: a(1;5;8) va b(-1;5;2)
11-bilet Quyidigi vektorlarni skalyar ko’paytiring: a(2;5;8) va b(-1;5;3)	**12-bilet** Quyidigi vektorlarni skalyar ko’paytiring: a(3;5;8) va b(-1;5;4)
13-bilet Quyidigi vektorlarni skalyar ko’paytiring: a(6;5;8) va b(-1;5;5)	**14-bilet** Quyidigi vaktorlarni skalyar ko’paytiring: a(1;5;8) va b(-2;5;0)
15-bilet Quyidigi vaktorlarni skalyar ko’paytiring: a(2;5;8) va b(-3;5;6)	**16-bilet** Quyidigi vaktorlarni skalyar ko’paytiring: a(3;5;8) va b(-4;5;7)

Mavzu: Burchakning radian o'lchovi.

1-bilet **Hisoblang:** 1. $\sin\frac{\pi}{4}+\cos\frac{\pi}{4}$ 2. $\text{tg}\,\frac{\pi}{3}+\text{ctg}\frac{\pi}{6}$	**2-bilet** **Hisoblang:** 1. $2\sin\frac{\pi}{4}+\cos\frac{\pi}{4}$ 2. $2\text{tg}\,\frac{\pi}{3}+\text{ctg}\frac{\pi}{6}$
3-bilet **Hisoblang:** 1. $\sin\frac{\pi}{4}+2\cos\frac{\pi}{4}$ 2. $\text{tg}\,\frac{\pi}{3}+2\text{ctg}\frac{\pi}{6}$	**4-bilet** **Hisoblang:** 1. $2\sin\frac{\pi}{4}+3\cos\frac{\pi}{4}$ 2. $2\text{tg}\,\frac{\pi}{3}+4\text{ctg}\frac{\pi}{6}$
5-bilet **Hisoblang:** 1. $5\sin\frac{\pi}{4}+2\cos\frac{\pi}{4}$ 2. $6\text{tg}\,\frac{\pi}{3}+2\text{ctg}\frac{\pi}{6}$	**6-bilet** **Hisoblang:** 1. $7\sin\frac{\pi}{4}+3\cos\frac{\pi}{4}$ 2. $6\text{tg}\,\frac{\pi}{3}+4\text{ctg}\frac{\pi}{6}$
7-bilet **Hisoblang:** 1. $7\sin\frac{\pi}{4}+8\cos\frac{\pi}{4}$ 2. $9\text{tg}\,\frac{\pi}{3}+7\text{ctg}\frac{\pi}{6}$	**8-bilet** **Hisoblang:** 1. $7\sin\frac{\pi}{4}+8\cos\frac{\pi}{4}$ 2. $5\text{tg}\,\frac{\pi}{3}+9\text{ctg}\frac{\pi}{6}$

9-bilet **Hisoblang:**	**10-bilet** **Hisoblang:**
1. $\sin\frac{\pi}{4}$ - $\cos\frac{\pi}{4}$ 2. tg $\frac{\pi}{3}$ - ctg$\frac{\pi}{6}$	1. $2\sin\frac{\pi}{4}$ - $\cos\frac{\pi}{4}$ 2. 2tg $\frac{\pi}{3}$ - ctg$\frac{\pi}{6}$
11-bilet **Hisoblang:**	**12-bilet** **Hisoblang:**
1. $\sin\frac{\pi}{4}$ - $2\cos\frac{\pi}{4}$ 2. tg $\frac{\pi}{3}$ - 2ctg$\frac{\pi}{6}$	1. $2\sin\frac{\pi}{4}$ - $3\cos\frac{\pi}{4}$ 2. 2tg $\frac{\pi}{3}$ - 4ctg$\frac{\pi}{6}$
13-bilet **Hisoblang:**	**14-bilet** **Hisoblang:**
1. $5\sin\frac{\pi}{4}$ - $2\cos\frac{\pi}{4}$ 2. 6tg $\frac{\pi}{3}$ - 2ctg$\frac{\pi}{6}$	1. $7\sin\frac{\pi}{4}$ - $3\cos\frac{\pi}{4}$ 2. 6tg $\frac{\pi}{3}$ - 4ctg$\frac{\pi}{6}$
15-bilet **Hisoblang:**	**16-bilet** **Hisoblang:**
1. $7\sin\frac{\pi}{4}$ - $8\cos\frac{\pi}{4}$ 2. 9tg $\frac{\pi}{3}$ - 7ctg$\frac{\pi}{6}$	1. $7\sin\frac{\pi}{4}$ - $8\cos\frac{\pi}{4}$ 2. 5tg $\frac{\pi}{3}$ - 9ctg$\frac{\pi}{6}$

Mavzu: Burchakning sinusi, kosinusi, tangensi va kotangensi.

1-bilet Agar $\sin\alpha=\frac{1}{2}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**2-bilet** Agar $\sin\alpha=\frac{2}{3}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$
3-bilet Agar $\sin\alpha=\frac{3}{4}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**4-bilet** Agar $\sin\alpha=\frac{4}{5}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$
5-bilet Agar $\sin\alpha=\frac{5}{6}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**6-bilet** Agar $\sin\alpha=\frac{6}{7}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$
7-bilet Agar $\sin\alpha=\frac{7}{8}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**8-bilet** Agar $\sin\alpha=\frac{8}{9}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\cos\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$

9-bilet Agar $\cos\alpha=\frac{1}{2}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**10-bilet** Agar $\cos\alpha=\frac{2}{3}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$
11-bilet Agar $\cos\alpha=\frac{3}{4}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**12-bilet** Agar $\cos\alpha=\frac{4}{5}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$
13-bilet Agar $\cos\alpha=\frac{5}{6}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**14-bilet** Agar $\cos\alpha=\frac{6}{7}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$
15-bilet Agar $\cos\alpha=\frac{7}{8}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$	**16-bilet** Agar $\cos\alpha=\frac{8}{9}$ va $0<\alpha<\frac{\pi}{2}$ bo'lsa, $\sin\alpha=?$ $\operatorname{tg}\alpha=?$ $\operatorname{ctg}\alpha=?$

Foydalanilgan adabiyotlar ro‘yxati

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