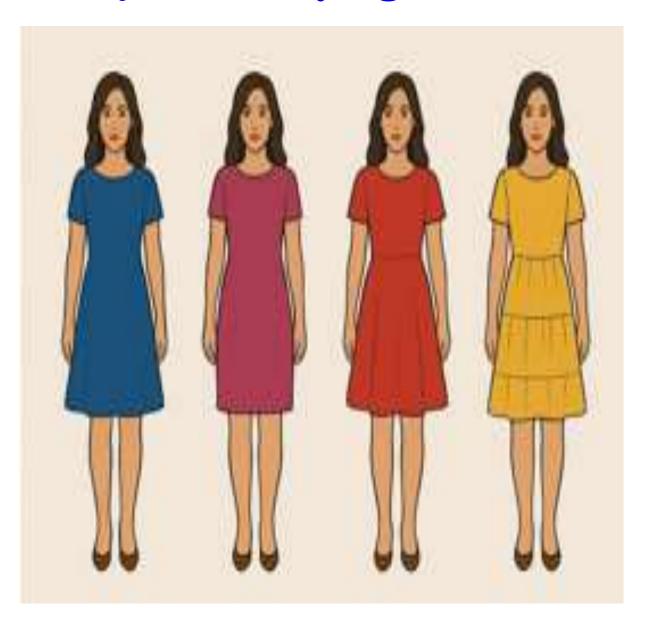
15-Mavzu: O'tqazma yengli ayollar ko'ylagi asos chizmasini hisoblash va chizish. Bir chokli yeng konstruksiyasini hisoblash va chizish

Reja:

- 1. Ayollar kiyimi uchun asosiy oʻlchovlar.
- 2. Ayollar kiyimi uchun bazis toʻrini chizish va old boʻlak, orqa boʻlak chizmasini chizish.
- 3. Yeng chizmasini hisoblash va chizish.

Ayollar ko'ylagi fasonlari



O'tqazma yengli ayollar ko'ylagi asos chizmasini chizih uchun asosiy o'lchovlar

(tavsiya etilayotgan ko'ylak o'lchovi 158-46).

Nº	O'lchov belgisi	O'lchov nomi	Qiymati, sm
1	C _{bo} 'y	Bo'yin yarim aylanasi	17,9
2	C_{kI}	I ko'krak yarim aylanasi	44
3	C_{kII}	II ko'krak yarim aylanasi	46
4	C _{bel}	Bel yarim aylanasi	35,5
5	C _{bo'k}	Bo'ksa yarim aylanasi	50
6	K_k	Ko'krak kengligi	16,7
7	Kor	Orqa kengligi	17,8
8	K _{yel}	Yelka kengligi	13
9	U _{or.bel}	Orqaning belgacha uzunligi	41,6
10	B_{k}	Ko'krak balandligi	26,2
11	$U_{ol.bel}$	Oldning belgacha uzunligi	42,8
12	B _{qiya yel.}	Orqaning qiya yelka balandligi	42
13	B _{or.o'miz}	Orqa o'miz chuqurligi	20,7
14	$U_{qo'l}$	U _{qo'l} Qo'lning uzunligi	
15	O _{yel}	Yelka aylanasi	29,1
16	O _{bil}	Bilak aylanasi	16,1

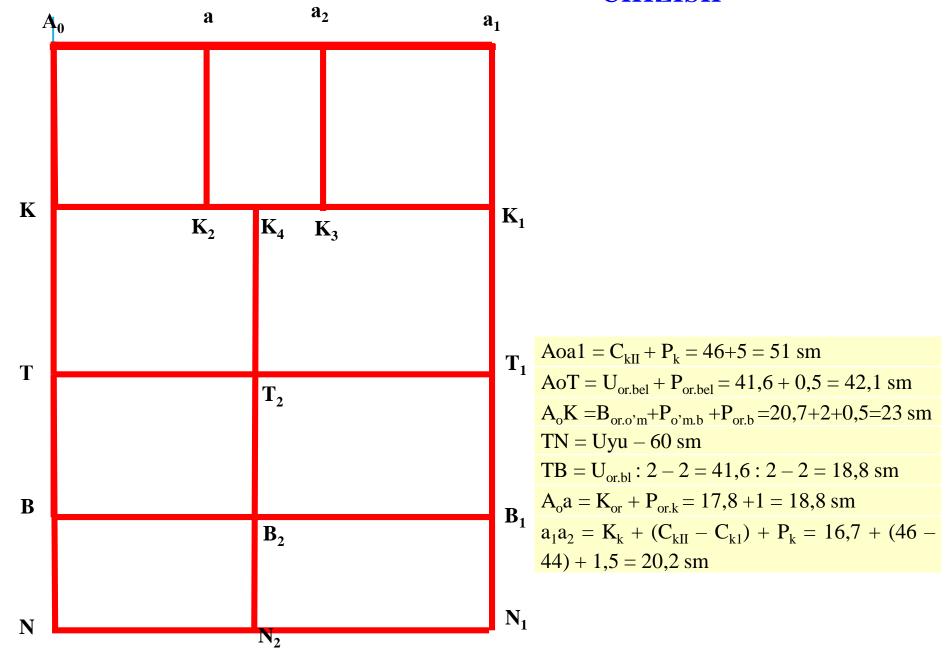
O'tqazma yengli ayollar ko'ylagi asos chizmasini chizish uchun qo'shimcha haqlar

T/r	Qo'shimcha haq belgilari	Qo'shimcha haq
		kattaliklari, sm
1	P_k	5
2	P _{bel}	3
3	P _{bo'k}	2
4	P _{or.k.}	1
5	P _{ol.k.}	1-1,5
6	P _{or.b.}	0,5
7	P _{ol.b.}	0,5
8	P _{o'm.k.}	0,7-1
9	P _{yel.ay.}	6
10	P _{o'm.b.}	2
11	P _{yel.ayl}	6

MAKTAB YOSHIDAGI QIZ BOLALAR KO'YLAGI KONSTRUKSIYASI CHIZMASINING HISOBI

T/r	Konstruktiv bo'lak belgisi	Siljitish yo'nalishi	Hisob formulasi va hisoblar	Konstruktiv bo'lak qiymati, sm		
	Ko'ylak baza to'rini qurish					
1	A_0a_1	o'ngga	$Aoa1 = C_{kII} + P_k = 46+5$	51		
2	A _o T	pastga	$AoT = U_{or.bel} + P_{or.bel} = 41,6 + 0,5$	42,1		
3	$A_{o}K$	pastga	$A_{o}K = B_{or.o'm} + P_{o'm.b} + P_{or.b} = 20,7 + 2 + 0,5$	23		
4	TN	pastga	TN = Uyu	60		
5	ТВ	pastga	$TB = U_{or.bl} : 2 - 2 = 41,6 : 2 - 2$	18,8		
6	Ko'krak, bel, bo'ksa, etak chizig'idan gorizontal chiziq o'tkaziladi; kesishgan joylarga					
	K ₁ , T ₁ , B ₁ , N ₁ nuqtalar belgilab qo'yiladi.					
7	$A_{o}a$	o'ngga	$A_{o}a = K_{or} + P_{or.k} = 17,8 + 1$	18,8		
8	Pastga vertikal tushirib, kesishgan joyga K ₂ nuqta qo'yiladi.					
9	$a_1 a_2$	chapga	$a_1 a_2 = K_k + (C_{kII} - C_{k1}) + P_k = 16,7 + (46 - 44) + 1,5$	20,2		
10	aa_2	o'ngga	$aa_2 = A_0a_1 - (A_0a + a_1a_2)$	12		

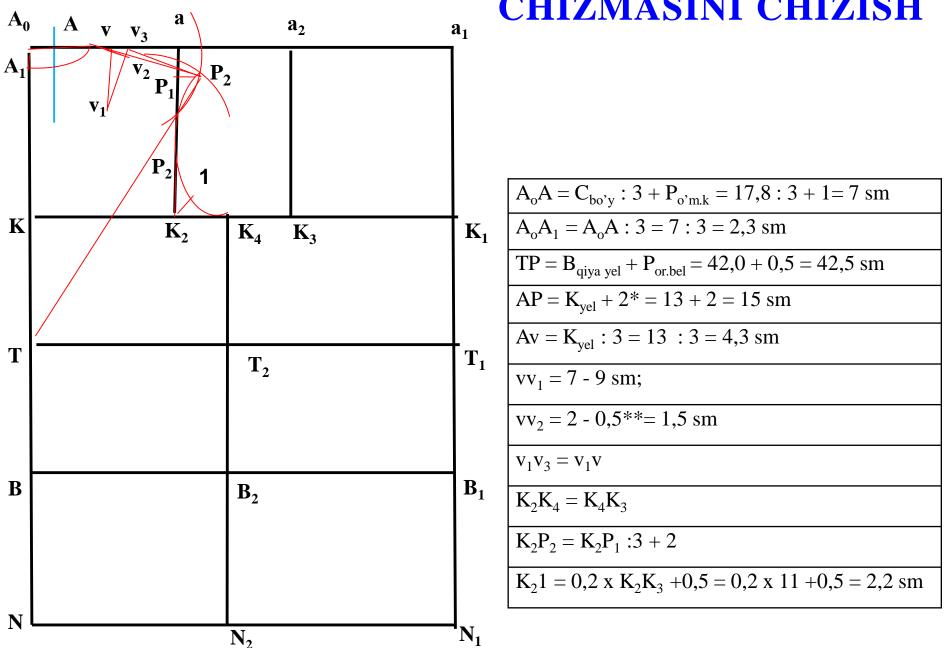
KO'YLAK BAZA TO'RINI CHIZISH



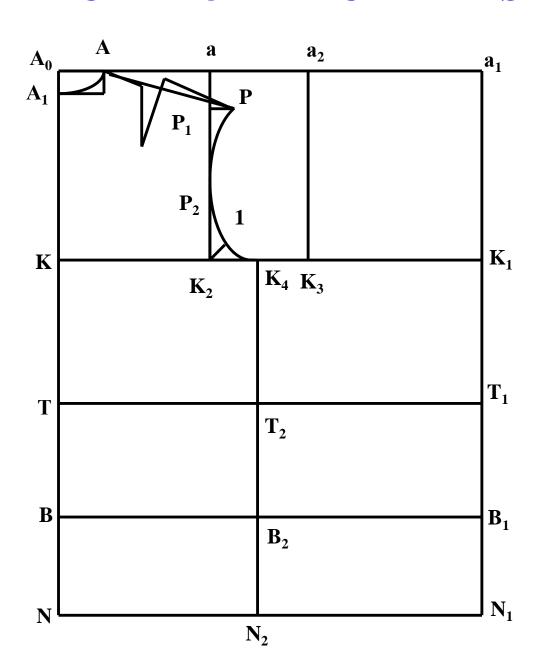
ORT BO'LAK CHIZMASINI CHIZISH

T/r	Konstruktiv			Konstruktiv	
	bo'lak	Siljitish yo'nalishi	Hisob formulasi va hisoblar	bo'lak	
	belgisi			qiymati, sm	
11	$A_{o}A$	o'ngga	$A_oA = C_{bo'y} : 3 + P_{o'm.k} = 17.8 : 3 + 1$	7	
12	A_0A_1	pastga	$A_0A_1 = A_0A : 3 = 7 : 3$	2,3	
13	TP	qiya yuqoriga	$TP = B_{qiya\ yel} + P_{or.bel} = 42,0 + 0,5$	42,5	
14	AP	o'ngga	$AP = K_{yel} + 2* = 13 + 2$	15	
15	Av	o'ngga	$Av = K_{yel} : 3 = 13 : 3$	4,3	
16	vv_1	pastga	$vv_1 = 7 - 9 \text{ sm};$	7	
17	vv_2	o'ngga	$vv_2 = 2 - 0.5**$	1,5	
18	v_1v_3	qiya yuqoriga	$v_1 v_3 = v_1 v$	7	
19	Vitachka tomonlarini chizib, yelka chizig'i uzil-kesil shakllantiriladi.				
	P nuqtad	an aK ₂ chizig'iga perpe	ndikulyar o'tkaziladi, kesishgan joyga P ₁ nuqta q	o'yiladi.	
20	K_2K_4	o'ngga	$K_2K_4 = K_4K_3$	(chizmadan	
	K ₂ K ₄	o ngga		o'lchanadi).	
21	V D		$K_2P_2 = K_2P_1 : 3 + 2$	(chizmadan	
	K_2P_2	yuqoriga		o'lchanadi).	
22	K ₂ 1	bissektrisa	$K_2 1 = 0.2 \times K_2 K_3 + 0.5 = 0.2 \times 11 + 0.5$	2,7	
23		P, P ₂ , 1, K ₄ nuqtalar or	rqali ort bo'lak yeng o'miz chizig'i o'tkaziladi.		

ORT BO'LAK CHIZMASINI CHIZISH



ORT BO'LAK CHIZMASI



OLD BO'LAK CHIZMASINI CHIZISH

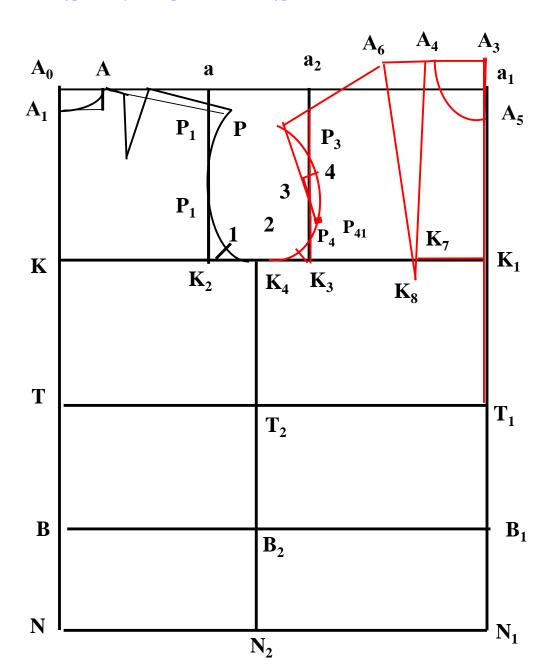
T/r	Konstruktiv bo'lak belgisi	Siljitish yo'nalishi	Hisob formulasi va hisoblar	Konstruktiv bo'lak qiymati, sm
24	T_1A_3	yuqoriga	$T_1A_3 = U_{ol.bel} + P_{ol.bel} = 42,8 + 0,5$	43,3
25	A_3A_4	chapga	$A_3 A_4 = A_0 A$	7
26	A_3A_5	pastga	$A_3 A_5 = A_3 A_4 + 1 = 7 + 1$	8
27	K_1K_7	chapga	$\mathbf{K}_{1}\mathbf{K}_{7}=\mathbf{M}\mathbf{k}$	9,1
28	A_4K_8	pastga	$A_4K_8 = Bk$	26,2
29	A_4A_6	chapga	$A_4A_6 = 2 \times (C_{k2} - C_{k1}) + 2*** = 2 \times (46 - 44) + 2$	6
30	K_8A_6	yuqoriga	$\mathbf{K}_8 \mathbf{A}_6 = \mathbf{K}_8 \mathbf{A}_4$	26,2
31	K_3P_3	yuqoriga	$\mathbf{K}_3\mathbf{P}_3 = \mathbf{K}_2\mathbf{P}_1$	Chizmadan o'lchanadi
32	K_3P_4	yuqoriga	$\mathbf{K}_3\mathbf{P}_4 = \mathbf{K}_3\mathbf{P}_3 : 3$	Chizmadan o'lchanadi
33	P_4P_{41}	o'ngga	$P_4 P_{41} = 0.6 \text{ sm}.$	0,6
34	$P_{41}P_{5}$	qiya yuqoriga	$P_{41}P_5 = P_4P_3$	Chizmadan o'lchanadi
35	A_6P_{51}	chapga	$A_6 P_{51} = Kyel$	13

OLD BO'LAK CHIZMASINI CHIZISH (DAVOMI)

T/r	Konstruktiv bo'lak belgisi	Siljitish yo'nalishi	Hisob formulasi va hisoblar	Konstruktiv bo'lak qiymati, sm		
36	Yordamchi	chiziq bilan P	₅ P ₄ nuqtalar birlashtiriladi; bu chiziq ikkiga bo'lir	nadi. Nuqta 3		
	hosil bo'la	hosil bo'ladi. Bunga uzunligi 1 sm bo'lgan perpendikulyar o'tkaziladi. Nuqta 4 hosil				
		bo'ladi.				
37	P_5P_{51}	chapga	$P_5 P_{51} = 0.5 \text{ sm}$	0,5		
38	K ₃ 2	bissektrisa	$K_3 = 0.2 \times K_2 = 0.2 \times 11$	2,2		
39	Old bo'lak yeng o'miz chizig'i P ₅₁ , 4, P ₄ , 2, K ₄ , K ₆ nuqtalar o'rqali o'tkaziladi.					

OLD BO'LAK CHIZMASINI CHIZISH

$T_1A_3 = U_{ol.bel} + P_{ol.bel} = 42.8 + 0.5 = 43.3 \text{ sm}$
$A_3 A_4 = A_0 A = 7 \text{ sm}$
$A_3 A_5 = A_3 A_4 + 1 = 7 + 1 = 8 \text{ sm}$
$K_1K_7 = Mk = 9,15 \text{ sm}$
$A_4K_8 = Bk = 26,2 \text{ sm}$
$A_4A_6 = 2 \times (C_{k2} - C_{k1}) + 0.5*** = 2 \times (46 - 44)$
+2=6 sm
$K_8 A_6 = K_8 A_4$
$\mathbf{K}_3 \mathbf{P}_3 = \mathbf{K}_2 \mathbf{P}_1$
$K_3P_4 = K_3P_3 : 3$
$P_4 P_{41} = 0.6 \text{ sm.}$
$P_{41}P_5 = P_4P_3$
$A_6 P_{51} = Kyel = 13 \text{ sm}$
$P_5 P_{51} = 0.5 \text{ sm}$
$K_3 = 0.2 \times K_2 K_3 = 0.2 \times 11 = 2.2 \text{ sm}$

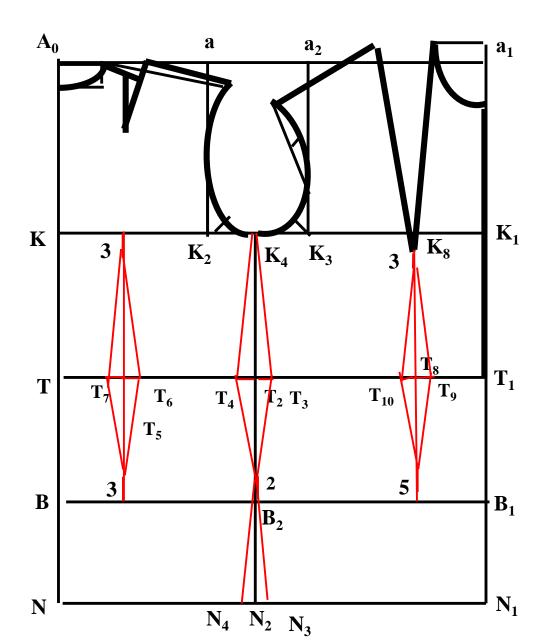


BEL QISMIDAGI VITACHKALARNI CHIZISH

T/r	Konstruktiv bo'lak belgisi	Siljitish yo'nalishi	Hisob formulasi va hisoblar	Konstruktiv bo'lak qiymati, sm		
40			$EV = TT_1 - (C_{bel} + P_{bel}) = 51 - (35,5+3)$	12,5		
41	T_3T_4	o'ngga	$T_3T_4 = 0.5 \text{ x EV} = 0.5 \text{ x } 12.5$	6,25		
42	$T_2T_3=T_2T_4$	o'ngga - chapga	$T_2T_3 = T_2T_4 = 6.25:2$	3,1		
43	T_6T_7	o'ngga	$T_6 T_7 = 0.3 \text{ x Ev} = 0.3 \text{ x } 12.5$	3,75		
44	TT_5	o'ngga	$TT_5 = KK_2 : 2 = 18.8 : 2$	9,4		
45	$T_5T_6=T_5T_7$	o'ngga - chapga	$T_5T_6 = T_5T_7 = 3,75:2$	1,9		
46	$T_{9}T_{10}$	o'ngga	$T_9 T_{10} = 0.2 \text{ x EV} = 0.2 \text{ x } 12.5$	2,5		
47	T_1T_8	chapga	$T_1T_8 = K_1K_7;$	9,1		
48	$T_8T_9 = T_8T_{10}$	o'ngga - chapga	$T_8T_9 = T_8T_{10} = 2,5:2$	1,3		
49	Ort tomondagi vitachkaning yuqori tomoni ko'krak chizig'idan 3 sm pastda, ostki tomoni bo'ksa chizig'idan 3 sm yuqorida bo'ladi; old tomondagi vitachkaning yuqori tomoni K ₈ nuqtasidan 3 sm pastda, pastki tomoni co'ksa chizig'idan 4-5 sm yuqorida bo'ladi.					
50	B_3B_4	chapga	$B_3B_4 = (C_{bo'k} + P_{bo'k}) - BB_1 = (50+3)-51$	2		
51	N ₂ N ₃ =N ₂ N ₄	o'ngga - chapga	$N_2N_3 = N_2N_4$	4-5		

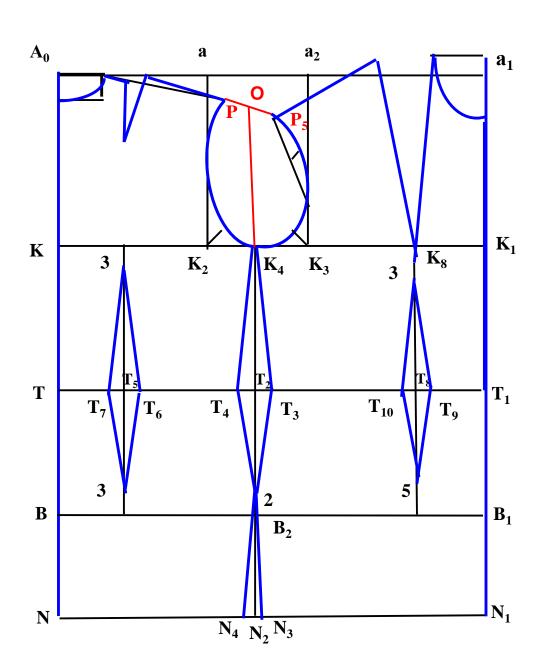
BEL QISMIDAGI VITACHKALARNI CHIZISH

T_3T_4	= 0.5 x EV = 0.5 x 12.5 = 6.2 sm
T_2T_3	$= T_2T_4 = 6.2 : 2 = 3.1 \text{ sm}$
T_6T_7	= 0.3 x Ev = 0.3 x 12.5 = 3.7 sm
TT_5	$= KK_2 : 2 = 18,8 : 2 = 9,4 \text{ sm}$
T_5T_6	$_{5} = T_{5}T_{7} = 3.7 : 2 = 1.9 \text{ sm}$
T_9T_1	$_0 = 0.2 \text{ x EV} = 0.2 \text{ x } 12.5 = 2.5 \text{ sm}$
T_1T_8	$=\mathbf{K}_{1}\mathbf{K}_{7};$
T_8T_9	$T_8 = T_8 T_{10} = 2.5 : 2 = 1.3 \text{ sm}$
B_3B_2	$_{4} = (C_{bo'k} + P_{bo'k}) - BB_{1} = (50+3)-51 = 2$
N ₂ N	$_3 = N_2 N_4 = 4-5 \text{ sm}$



Yeng o'mizining vertikal diametri OO₁ ni hisoblash:

Ko'ylak asos chizmasida P va P₅ nugtalar tutashtirilib, teng o'rtasi topiladi va O nuqta bilan belgilanadi. O va G₄ masofa o'lchanadi.



YENG KONSTRUKSIYASI CHIZMASINING HISOBI

T/r	Konstrukti v bo'lak belgisi	Siljitish yo'nalishi	Hisob formulasi va hisoblar	Konstrukti v bo'lak qiymati, sm	
		Yeng asos chiz	masining to'r qismini chizish		
1	OO_1	o'ngga	$OO_1 = O_{yel} + P_{yel.ayl} = 29,1+6$	35,1	
2	OP	pastga	$OP = OK_4$ (ort bo'lak chizmasidagi yeng o'mizining vertikal diametri) – 2,5	chizmadan olinadi	
3	ON	pastga	$ON = U_{yeng}$	53,5	
4	OL	pastga	OL = ON : 2+5 = 53,5:2+2	31,8	
5	Gorizonta	al chiziq o'tkazib, ke	esishgan joylar R ₁ , L ₁ , N ₁ nuqtalar bilan bel	gilanadi.	
6	OO_2	o'ngga	$OO_2 = OO_1:2+0,5 = 35,1:2+0,5$	18	
7	OO_3	o'ngga	$OO_3 = OO_2$:2	chizmadan olinadi	
8	O_1O_4	chapga	$O_1O_4 = O_1O_2:2$	chizmadan olinadi	
9	O ₂ , O ₃ , O ₄ nuqtalardan vertikal o'tkazib kesishgan joylarga P ₂ , L ₂ ,N ₂ , P ₃ , L ₃ , N ₃ , P ₄ , L ₄ , N ₄ nuqtalar qo'yib belgilanadi				

YENG KONSTRUKSIYASI CHIZMASINING HISOBI

T/r	Konstrukti v bo'lak belgisi	Siljitish yo'nalishi	Hisob formulasi va hisoblar	Konstruktiv bo'lak qiymati, sm		
		Ye	eng boshini chizish			
10	O_2O_5	chapga	$O_2O_5 = O_2O_3:2;$	chizmadan olinadi		
11	O_2O_6	o'ngga	$O_2O_6 = O_2O_4:2+1,5.$	chizmadan olinadi		
12	P_3O_7	yuqoriga	$P_3O_7 = K_2P_2$	chizmadan olinadi		
13	P_4O_8	yuqoriga	$P_4O_8 = K_3P_4$	chizmadan olinadi		
14						

 $\mathbf{0}$ $\mathbf{0}_1$

1. Yeng kengligi:

$$OO_1 = O_{yel} + P_{yel.ayl} = 29,6+6=35,1 \text{ sm}$$

 $\mathbf{o}_{_{1}}$

1. Yeng kengligi:

$$OO_1 = O_{yel} + P_{yel.ayl} = 29,1+6 = 35,1 \text{ sm}$$

2. Yeng uzunligi;

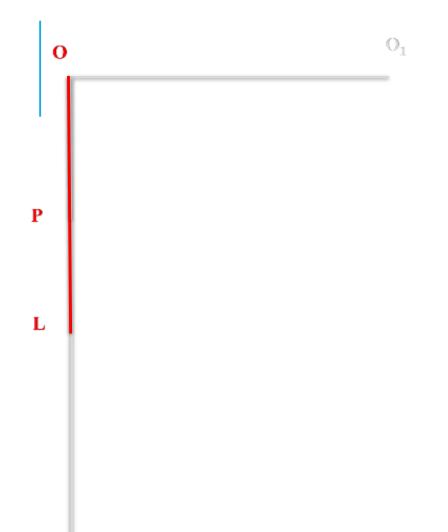
$$ON = U_{yeng} = 53.5 \text{ sm}$$



2. Yeng uzunligi;

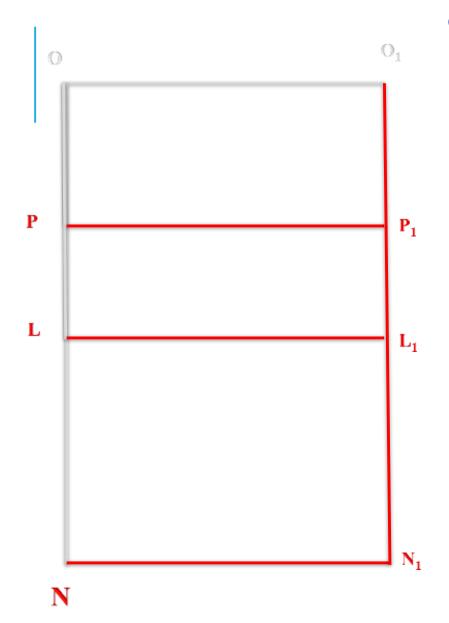
$$ON = U_{yeng} = 53.5 \text{ sm}$$

3. Yeng boshining balandligi: OP=OK₄ (ort bo'lak chizmasidagi yeng o'mizining vertikal diametri) – 2,5



- 3. Yeng boshining balandligi: OP=OK₄ (ort bo'lak chizmasidagi yeng o'mizining vertikal diametri) 2,5
- 5. Tirsak sathi:

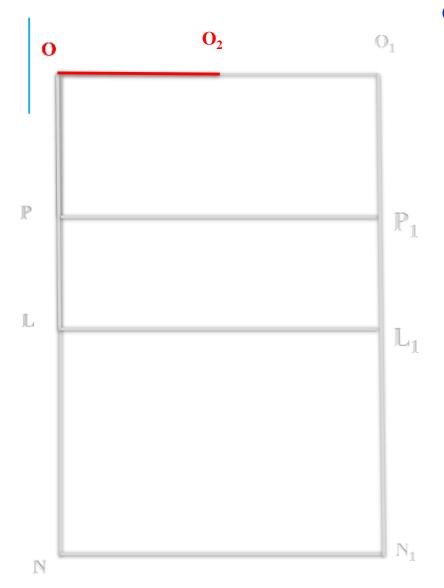
OL = ON:2+5 = 53,5:2+2 = 31,8 sm



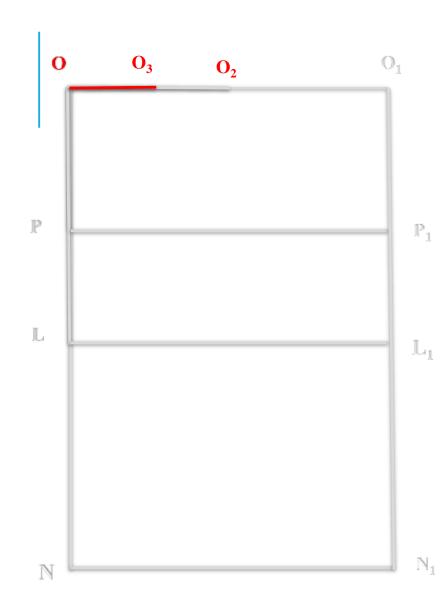
5. Tirsak sathi:

OL = ON:2+5 = 53,5:2+2 = 31,8 sm

6. P, L va N nuqtalardan gorizontal chiziqlar o'tkaziladi va P_1 , L_1 , N_1 nuqtalar bilan belgilanadi.

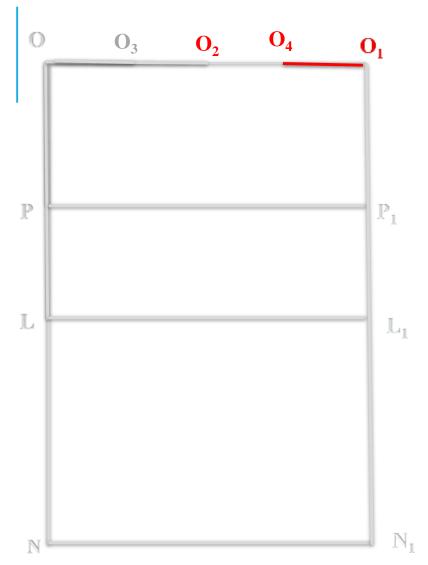


- 6. P, L va M nuqtalardan gorizontal chiziqlar o'tkaziladi va P₁, L₁, M₁ nuqtalar bilan belgilanadi.
- 7. Yeng qiyamasining eng yuqori nuqtasi: $OO_2 = OO_1:2+0,5=35,1:2+0,5=18 \text{ sm}$



- 7. Yeng qiyamasining eng yuqori nuqtasi: $OO_2 = OO_1$:2+0,5 =35,1:2+0,5 = 18 sm
- 8. Tirsakning o'tish qismi:

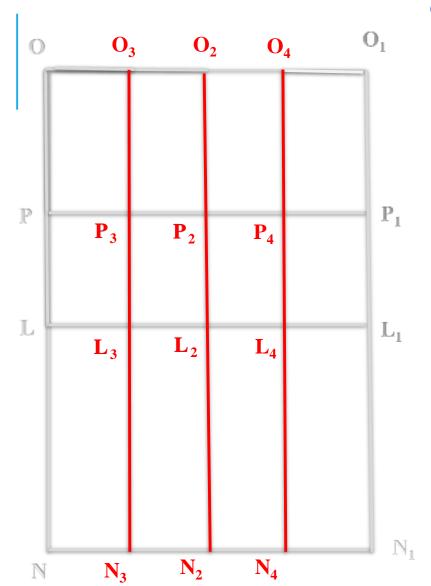
$$OO_3 = OO_2:2$$



8. Tirsakning o'tish qismi:

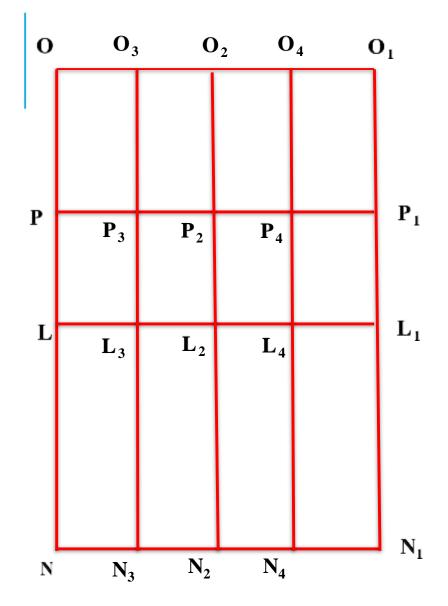
$$OO_3 = OO_2:2$$

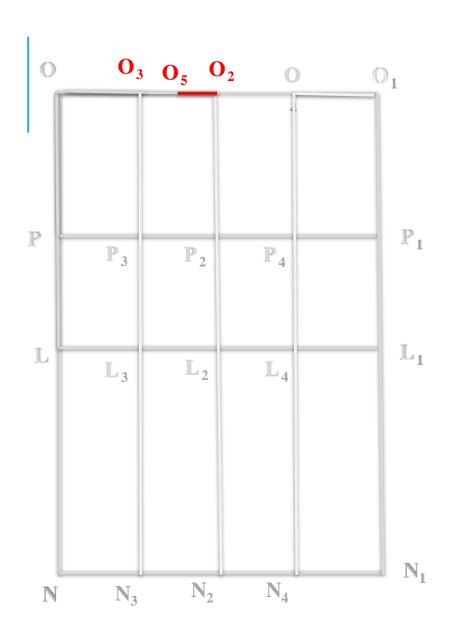
9. Old tomonning o'tish qismi: $O_1O_4=O_1O_2:2$



- 9. Old tomonning o'tish qismi: O₁O₄=O₁O₂:2
- 10. O₂, O₃, O₄ nuqtalardan vertikal o'tkazib kesishgan joylarga P₂, L₂, M₂, P₃, L₃, M₃, P₄, L₄, M₄ nuqtalar qo'yib belgilanadi.

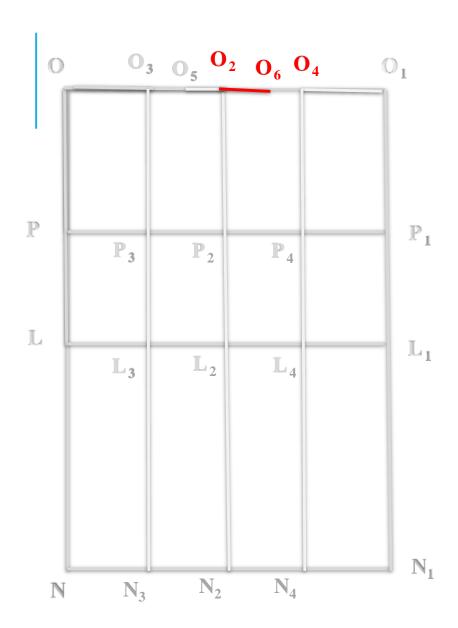
Bir chokli yeng asosi chizmasinihg to'r qismi





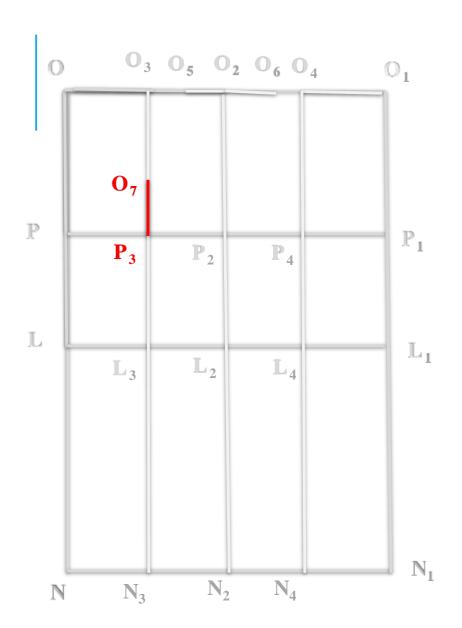
10. O₂, O₃, O₄ nuqtalardan vertikal o'tkazib kesishgan joylarga P₂, L₂, N₂, P₃, L₃, N₃, P₄, L₄, N₄ nuqtalar qo'yib belgilanadi.

11. $O_2O_5 = O_2O_3:2$;



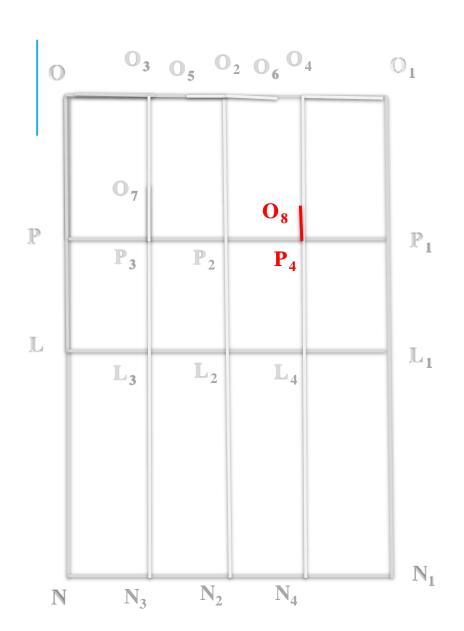
11.
$$O_2O_5 = O_2O_3$$
:2;

12.
$$O_2O_6 = O_2O_4$$
:2+1,5.



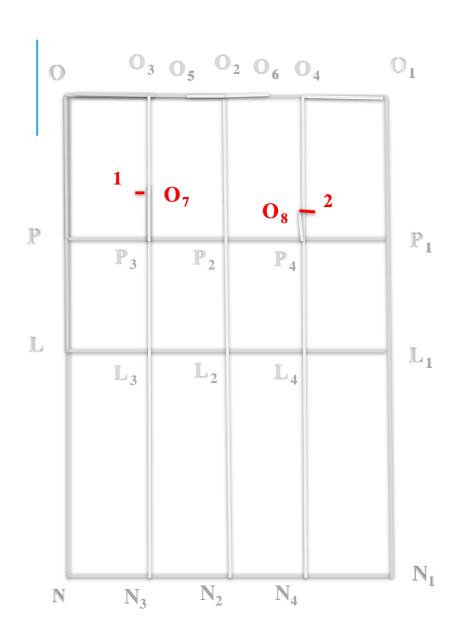
12.
$$O_2O_6 = O_2O_4$$
:2+1,5.

13.
$$P_3O_7 = K_2P_2$$
 (chizmadan olinadi)



13. $P_3O_7 = K_2P_2$ (chizmadan olinadi)

14. $P_4O_8 = K_3P_4$ (chizmadan olinadi).

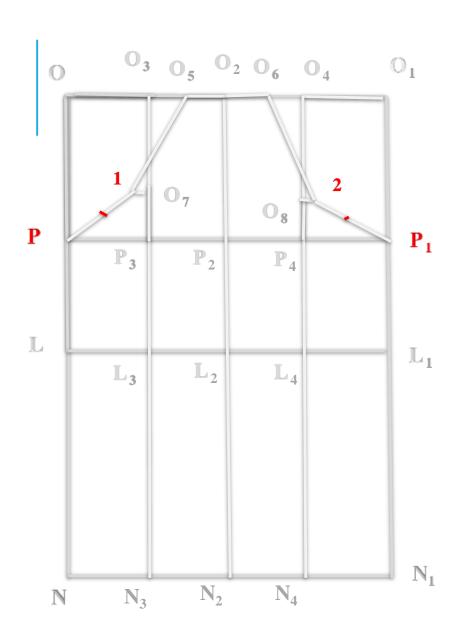


14. $P_4O_8 = K_3P_4$ (chizmadan olinadi).

15. O₇ nuqtadan chapga, O₈ nuqtadan o'ngga 0,5 sm dan o'lchab qo'yiladi va 1, 2 nuqtalar belgilanadi.

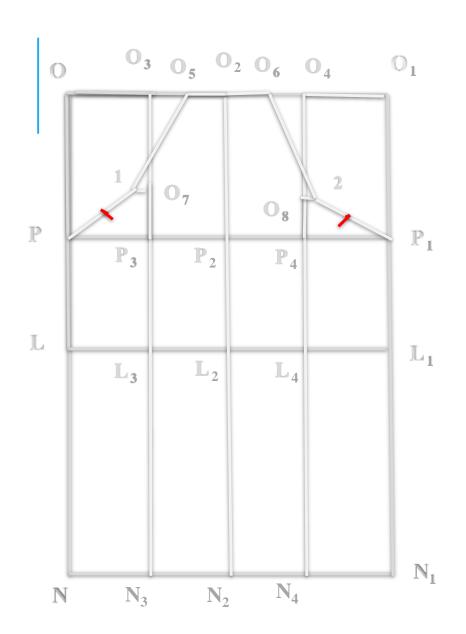
O_3 O_5 O_2 O_6 O_4 08 P $\mathbf{P_1}$ \mathbb{P}_2 \mathbb{L} \mathbb{L}_1 \mathbb{L}_2 \mathbb{L}_4 L3 \mathbb{N}_1 N_4 N_2 N N_3

- 15. O_7 nuqtadan chapga, O_8 nuqtadan oʻngga 0.5 sm dan oʻlchab qoʻyiladi va $1,\ 2$ nuqtalar belgilanadi.
- 16. O₅, 1, P; O₆, 2, P₁ nuqtalarni yordamchi to'g'ri chiziq bilan birlashtiriladi.



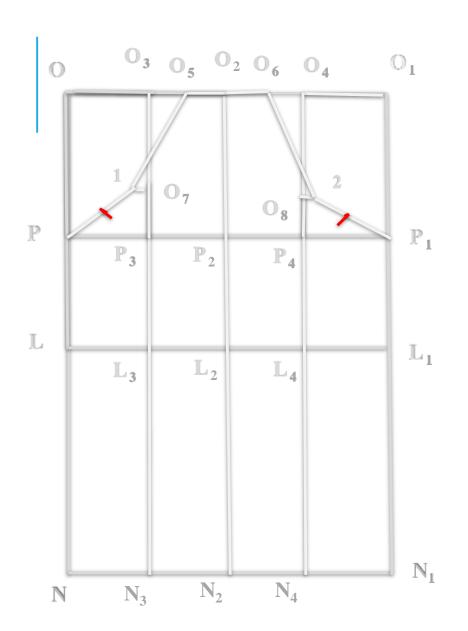
16. O₅, 1, P; O₆, 2, P₁ nuqtalarni yordamchi to'g'ri chiziq bilan birlashtiriladi.

17. P - 1 va $P_1 - 2$ qism ikkiga bo'linadi;



17. P - 1 va $P_1 - 2$ qism ikkiga bo'linadi.

18. 1 sm va 2-2,5 sm ga teng bo'lgan perpendikulyar o'tkaziladi;



17. P - 1 va $P_1 - 2$ qism ikkiga bo'linadi.

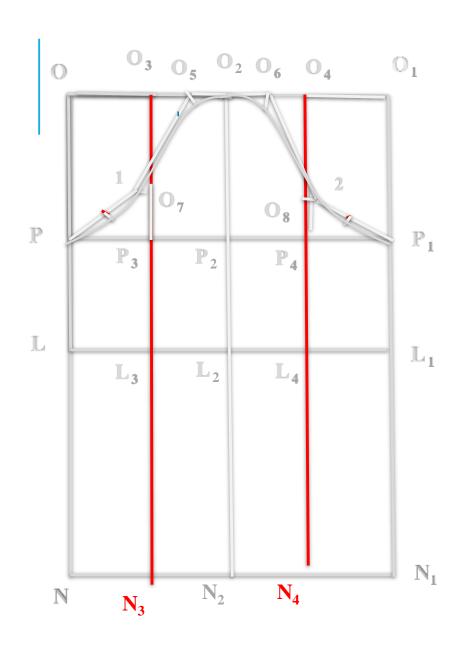
18. 1 sm va 2-2,5 sm ga teng bo'lgan perpendikulyar o'tkaziladi;

O_3 O_5 O_2 O_6 O_4 \mathbb{P} \mathbb{P}_2 \mathbb{P}_3 \mathbb{L} \mathbb{L}_1 \mathbb{L}_2 \mathbb{L}_4 \mathbb{L}_3 \mathbb{N}_1 N_2 N_4 N_3

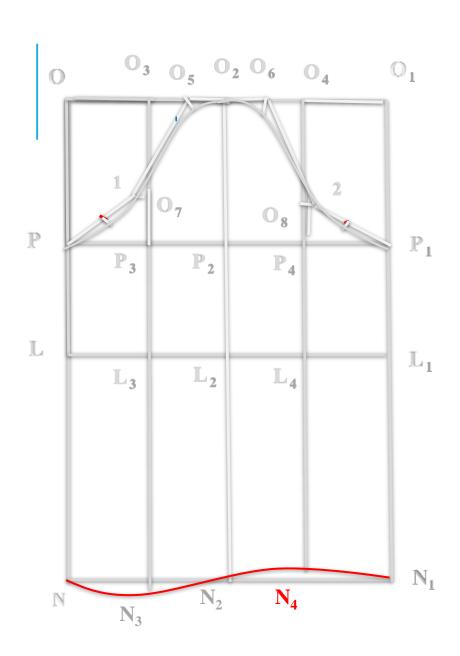
- 18. 1 sm va 2-2,5 sm ga teng bo'lgan perpendikulyar o'tkaziladi.
- 19. O₅ va O₆ burchaklar bissektrisasi bo'ylab 1-1,2 sm 1,5-2 sm ga teng kesma o'lchab qo'yiladi.

O_3 O_5 O_2 O_6 O_4 \mathbb{L} \mathbb{L}_1 \mathbb{L}_2 \mathbb{L}_4 L3 \mathbb{N}_1 N_2 N_4 N_3

- 19. O₅ va O₆ burchaklar bissektrisasi bo'ylab 1-1,2 sm 1,5-2 sm ga teng kesma o'lchab qo'yiladi.
- 20. Yordamchi va asosiy nuqtalar orqali yeng boshi ravon chiziqlar bilan shakli keltirib chiziladi.

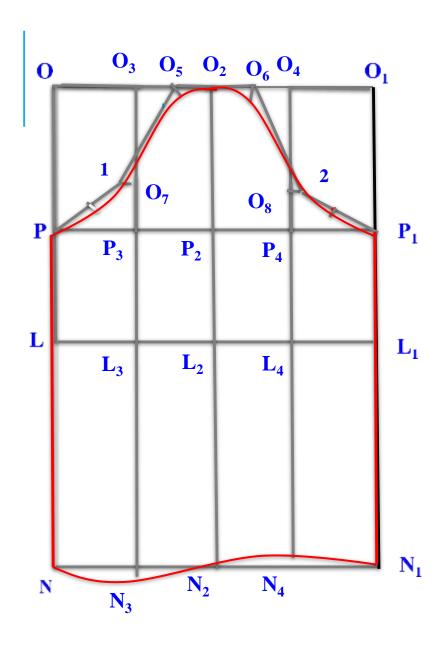


- 20. Yordamchi va asosiy nuqtalar orqali yeng boshi ravon chiziqlar bilan shakli keltirib chiziladi.
- 21. Yeng tirsakning o'tish qismi bo'ylab N_3 nuqtadan 1 sm uzaytiriladi. Yeng uchi old tomon o'tish qismi bo'ylab N_4 nuqtadan yuqoriga 1 sm qisqartiriladi.



- 21. Yeng tirsakning o'tish qismi bo'ylab N₃ nuqtadan 1 sm uzaytiriladi. Yeng uchi old tomon o'tish qismi bo'ylab N₄ nuqtadan yuqoriga 1 sm qisqartiriladi.
- 22. Yeng uchi ravon chiziq bilan chizib olinadi.

Bir chokli yeng asosi chizmasi



NAZORAT UCHUN SAVOLLAR:

- 1. Ayollar kiyimlari uchun qanday talablar qo'yiladi?
- 2. Ayollar ko'ylagi asos chizmasi uchun qanday asosiy o'lchovlar olinadi?
- 3. Ayollar ko'ylagi asos chizmasi uchun qanday qo`shimchalar olinadi?
- 4. Ko'ylak kengligi qaysi formula orqali topiladi?
- 5. Orqa kenglikni hisoblash formulasini ko'rsating?
- 6. Old kenglikni hisoblash formulasini ko'rsating?
- 7. Vitachkalar yig'indisi qaysi formula orqali topiladi?
- 8. Yeng asosi chizmasini chizish uchun qanday asosiy o'lchovlar va qo'shimchalar kerak bo'ladi?
- 9. Yeng kengligi qanday topiladi?
- 10. Yeng boshi balandligi qanday topiladi?

E'tiboringiz uchun raxmat!

