

## **Mavzu: To`g`ri chiziq**

Bu topshiriq to`g`ri chiziq kesmasini to`la tahlil qilishga, ya`ni kesmaning haqiqiy uzunligini topish va shu to`g`ri chiziq kesmasini proyeksiyalar tekisliklari bilan hosil qilgan burchaklarini topishga qaratilgan bo`lib, talaba berilgan ikkita masalani yechishi zarur. Har bir talaba o`z variantini 2 jadvallardan oladi. Topshiriqning grafik ishlar namunalari 2 shaklda keltirilgan.

### **GRAFIK ISHLAR SHARTLARI QUYIDAGICHADIR:**

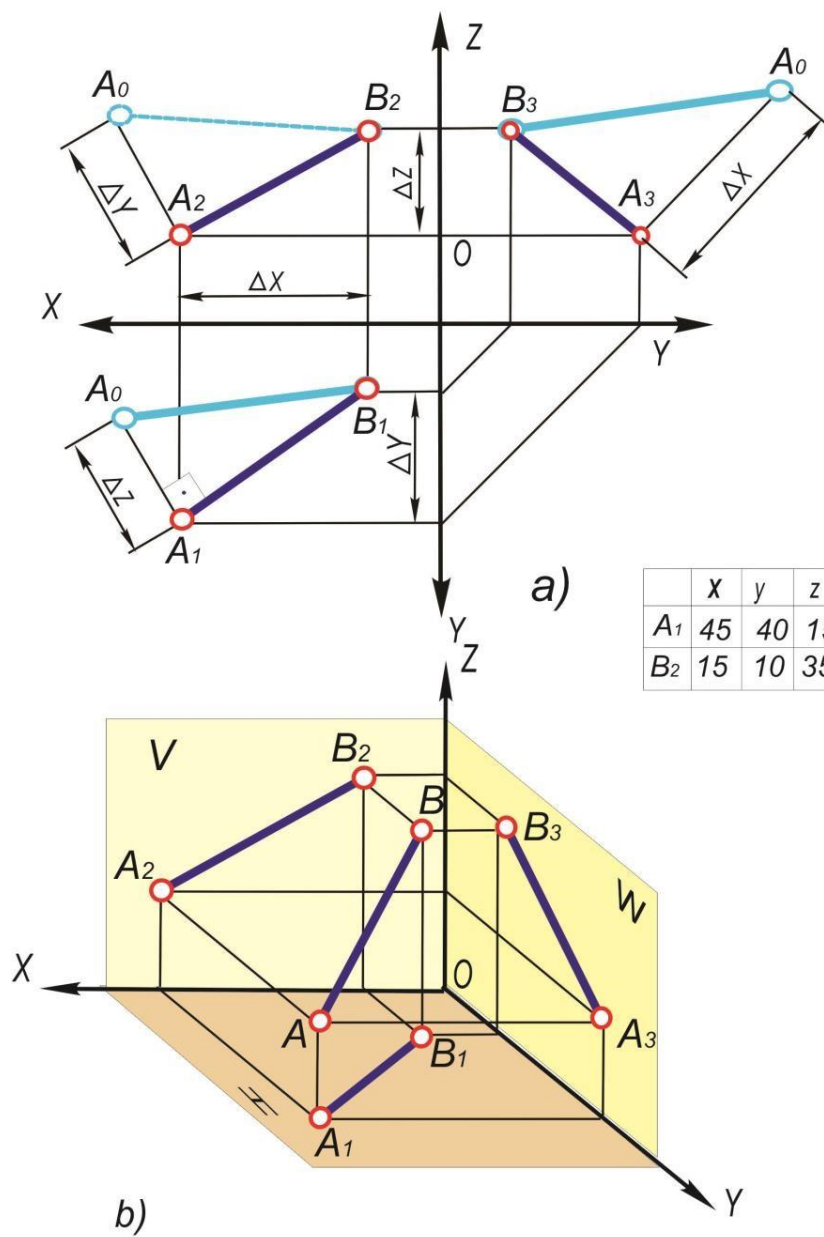
1. AB kesmaning berilgan koordinatalari bo`yicha uning uchta proyeksiyasi, to`g`ri chiziqning haqiqiy kattaligi va yaqqol tasviri yasalsin.
2. LM kesmaning berilgan ikki proyeksiyasiga asosan uning yetishmovchi proyeksiyasi va izlarini topib, qaysi chorakdan o`tishi aniqlansin va yaqqol tasviri bajarilsin. Topshiriq variantlari 3-jadvaldan olinadi. Topshiriq namunasi 3 shaklda keltirilgan

## Grafik ishlarini bajarishga doir ko'rsatmalar

Berilgan nuqtaning koordinatalarini tahlil qilinib, ular qaysi oktantlarda joylashganligini aniqlanadi, bu koordinatalar ishoralari, ya'ni (+) yoki (-) orqali bajariladi. Aniqlangan oktantlarning yaqqol tasvirlari chizilib, koordinata o'qlariga mos ravishda (2-shakl, a) koordinata markazidan biror o'lcham birligi asosida  $A_x$  – nuqtaning absissasi,  $A_y$  – nuqtaning ordinatasi va  $A_z$  – nuqtaning applikatasi o'lchab qo'yiladi. Topilgan  $A_x$ ,  $A_y$  va  $A_z$  nuqtalardan koordinata o'qlariga parallel bog'lovchi chiziqlar chizilib, A nuqtaning  $A_1$ ,  $A_2$  va  $A_3$  proyeksiyalari hosil qilinadi. Bu nuqtalardan proyeksiyalar tekisliklariga perpendikular chiziqlar (proyeksiyalovchi nurlar) o'tkazilib, A nuqtaning fazoviy holati topiladi. Ikkinchi B nuqtaning holati ham shunday topiladi va bu nuqtaning bir nomli proyeksiyalari o'zaro birlashtirilib, AB kesmaning

gorizontal  $A_1B_1$ , frontal  $A_2B_2$  va profil  $A_3B_3$  proyeksiyalari hosil qilinadi.

Kesmaning haqiqiy kattaligini topish uchun to'g'ri burchakli uchburchak qurish usulidan foydalaniladi. Buning uchun (2-shakl, b), masalan, kesmaning  $A_1B_1$  gorizontal proyeksiyasining  $A_1$  nuqtasidan unga tik to'g'ri chiziq o'tkazamiz, bu to'g'ri burchakli uchburchakning ikkinchi katetning yo'nalishi bo'lib (katetlardan biri sifatida kesmaning proyeksiyasi olinadi) uning qiymati  $\angle Z = \angle OB_z - \angle OA_z$ , ya'ni kesma uchlarini gorizontal proyeksiyalar tekisligidan uzoqliklar ayirmasi olinadi va  $A_0$  nuqta belgilanadi. Topilgan  $A_0$  nuqtani kesmaning ikkinchi uchi  $B_1$  bilan birlashtirilib to'g'ri burchakli uchburchakning  $A_0B_1$  gipotenuzasi yasaladi. Bu gipotenuza AB kesmaning haqiqiy kattaligi bo'ladi. Kesmaning proyeksiyasi  $A_1B_1$  bilan uning haqiqiy kattaligi orasidagi  $\angle$  burchak shu kesmani gorizontal proyeksiyalar tekisligi bilan hosil qilgan burchagidir. Qolgan proyeksiyalar tekisliklari bilan hosil qilgan  $\angle$  hamda  $\angle$  burchaklarni topish (2-shakl, a) dan ko'rinib turibdi.



2-shakl.

To`g`ri chiziqning haqiqiy kattaligini topish

Top-q № 2

Chizdi

Qabulova M

Imzo

17.09.19

Texnika

Variant № 12

Tekshirdi

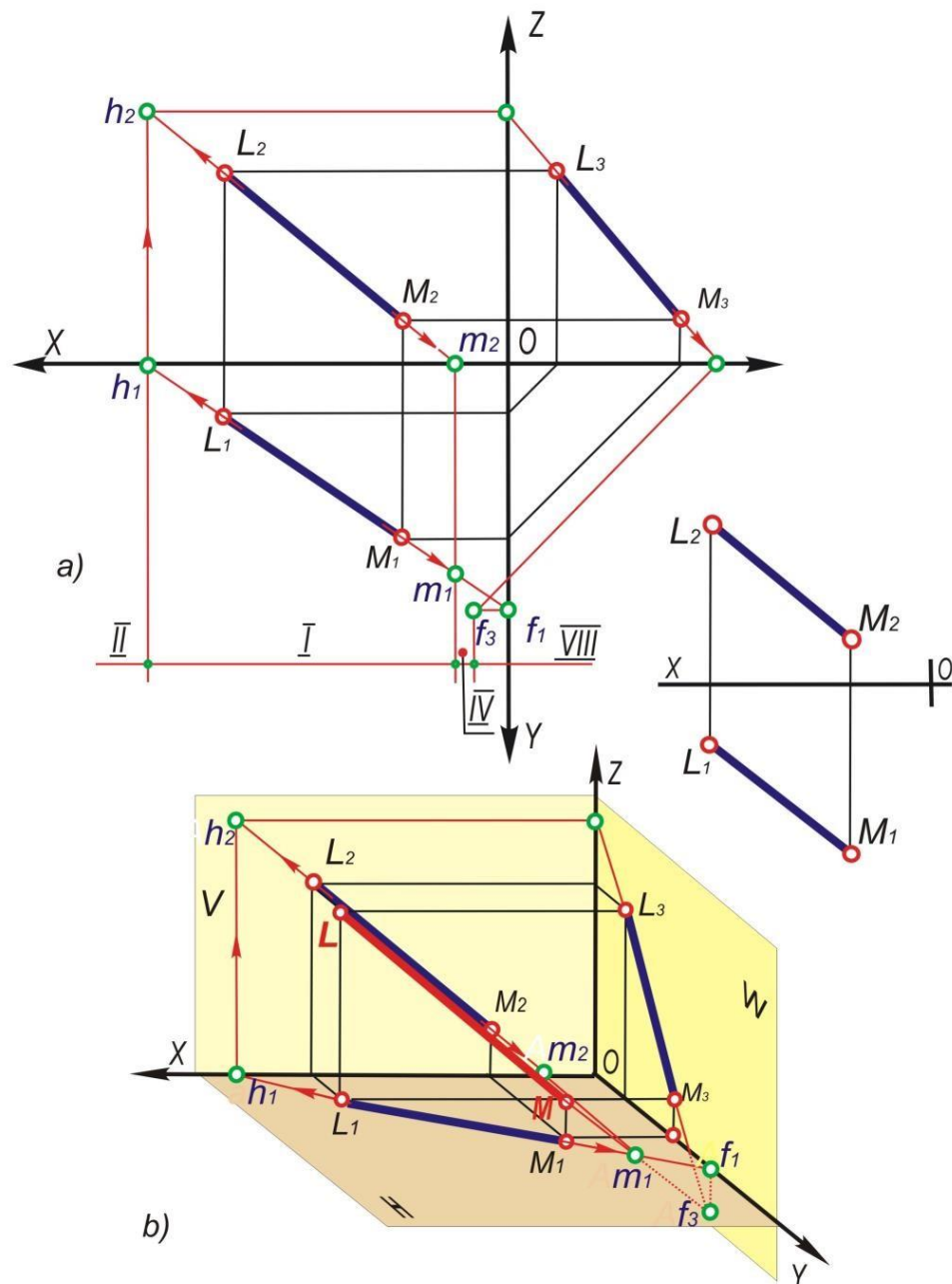
Tag`anov R

17.09.19

191 QXALTE

M1:1

variant	nuqta	koor-lar			variant	nuqta	koor-lar			variant	nuqta	koor-lar		
		X	Y	Z			X	Y	Z			X	Y	Z
1	A	75	25	5	10	A	60	65	30	19	A	65	20	55
	B	35	65	55		B	45	10	60		B	20	5	5
2	A	80	10	20	11	A	60	65	20	20	A	80	0	40
	B	45	70	0		B	45	20	50		B	0	20	70
3	A	60	30	65	12	A	65	20	0	21	A	65	20	10
	B	45	60	10		B	40	5	55		B	10	0	20
4	A	60	20	65	13	A	70	0	60	22	A	70	45	60
	B	45	50	20		B	45	50	10		B	40	55	0
5	A	65	0	20	14	A	65	10	20	23	A	60	10	60
	B	10	55	5		B	10	20	0		B	45	55	15
6	A	70	60	0	15	A	70	60	45	24	A	65	0	15
	B	45	10	50		B	40	0	55		B	40	55	0
7	A	70	10	20	16	A	60	60	10	25	A	75	25	0
	B	50	45	50		B	45	15	55		B	30	50	5
8	A	75	5	25	17	A	65	15	0	26	A	65	55	20
	B	35	55	65		B	40	0	55		B	25	5	5
9	A	80	20	10	18	A	75	25	0	27	A	80	40	0
	B	45	0	70		B	30	5	50		B	0	70	20

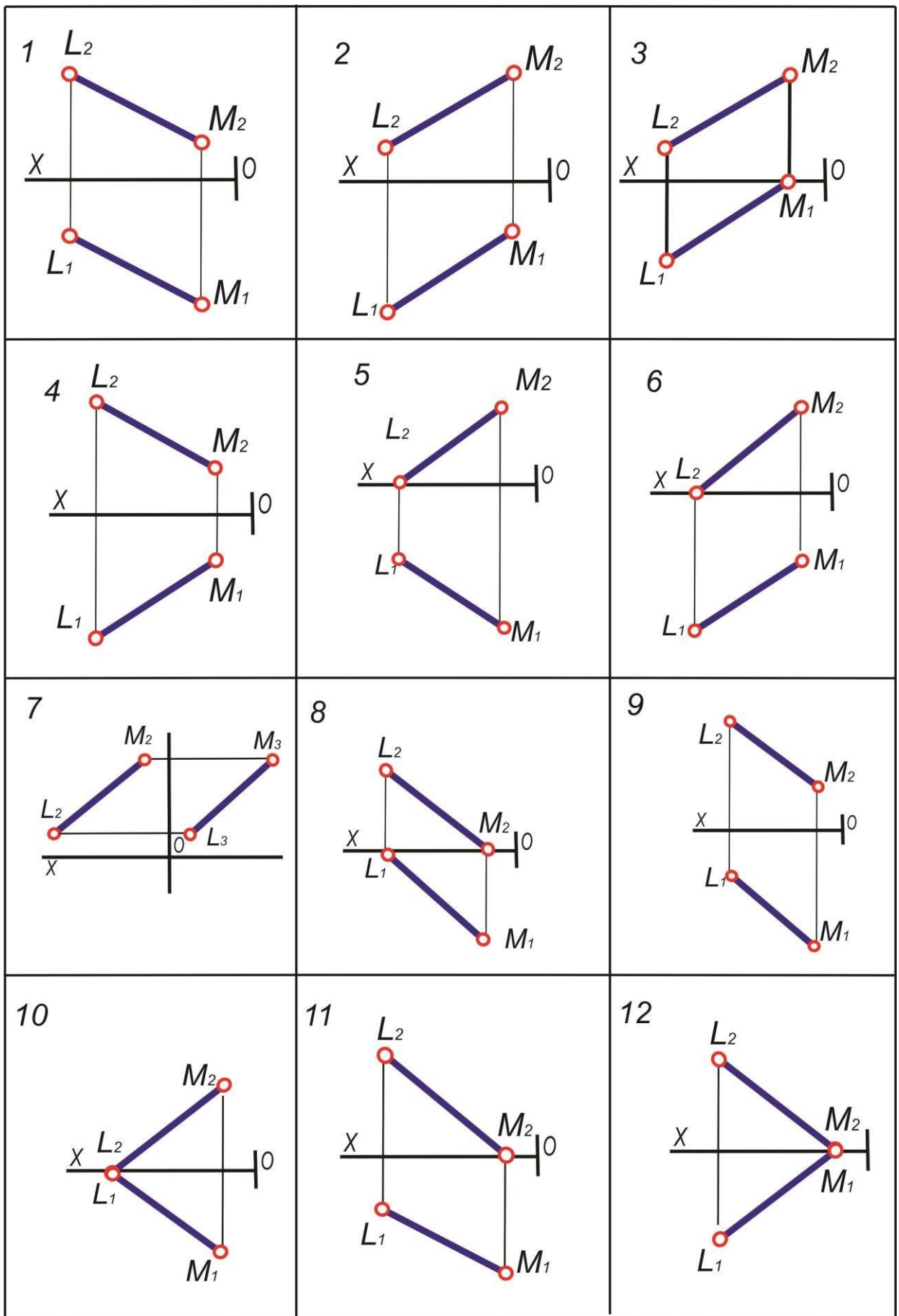


3-shakl.  
4-shakl.

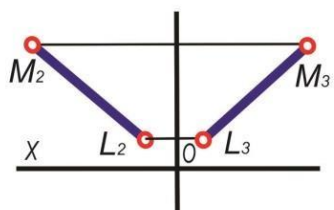
### To`g`ri chiziqlarning izlarini topish

Topshiriq № 3

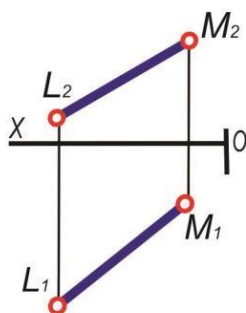
Chizdi	Qabulova M	Imzo	24.09.19	Texnika	Variant № 12
Tekshirdi	Tag`anov R		24.09.19	191 QXALTE	M 1:1



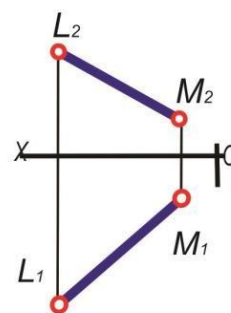
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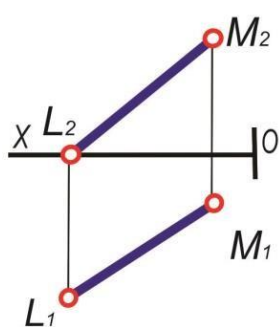
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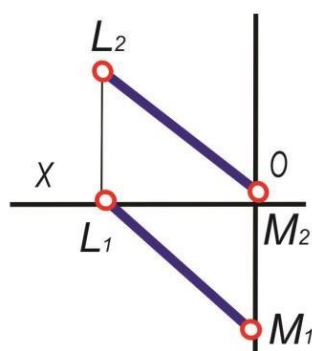
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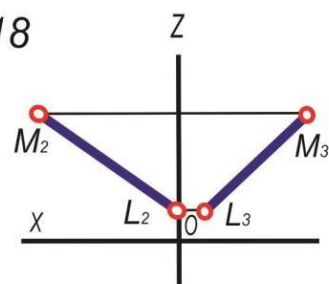
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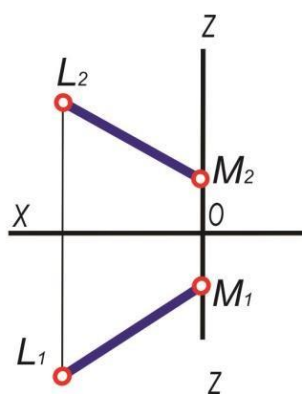
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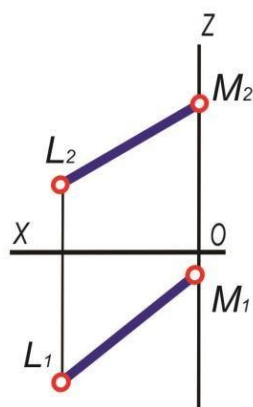
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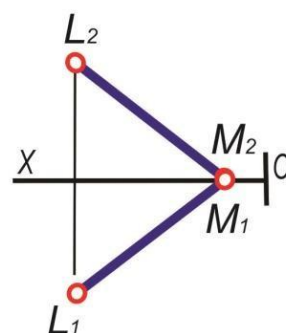
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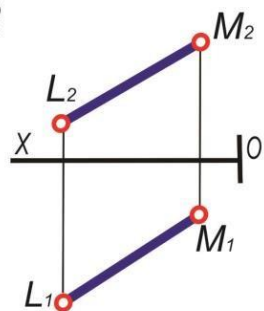
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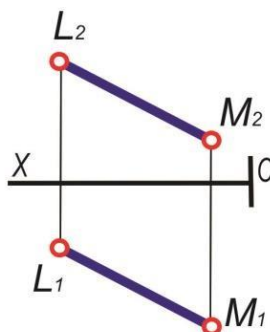
21



22



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24

