



Ustoz ko'makchi
metodik markazi

2
sinf

✓ Mavzulashtirilgan

✓ Uzlüksiz metodli

Matematika

yozuv kitobi

Maktab dasturini o'zlashtirishda
ko'makchi qo'llanma



3
QISM

1

2

4

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2-sinf **MATEMATIKA**

Yozuv kitobi

Maktab dasturini o'zlashtirishda ko'makchi qo'llanma
3 - Qism

"Ustoz ko'makchi metodik markazi" tomonidan tuzilgan.

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Qo'llanmadan foydalanish yo'riqnomasi

Assalomu alaykum, hurmatli ilmsevar ustozlar va ota-onalar!

Qo'lingizdagi ushbu metodik qo'llanma 2-sinf maktab dasturi doirasida mavzulashtirilgan bo'lib, o'quvchilarga matematikaning mohiyatini chuqurroq anglashda yordam berish uchun ishlab chiqilgan.

Yozuv kitobidan foydalanish jarayonida qo'shimcha daftar tutishga hojat bo'lmaydi. Darstar izchil ketma-ketlikda kelgan bo'lib, misollardagi bo'sh qoldirilgan o'rinlarni ko'rsatilgan namunadagi kabi to'ldirib borish orqali o'quvchi maktab dasturini oson va samarali o'zlashtirishi maqsad qilingan.

Har bir dars "Tushuntirish" qismi bilan boshlanadi. So'ngra "Sinf ishi" va "Uy ishi" sahifalaridagi misollarga o'tiladi.

Siz, hurmatli ustozlardan, "Tushuntirish" qismini o'qib eshittirishingiz, tushuntirishingiz va "Sinf ishi" sahifasidagi misollarni birgalikda ishlashingiz so'raladi.

"Uy ishi" sahifalaridagi misollar esa bolajonlarga mustaqil bajarish uchun topshiriladi. O'quvchilarning yosh xususiyatlari hisobga olinib, "Uy ishi" mashqlari "Sinf ishi"dagi misollar uslubiga o'xshash tarzda tuzilgan. Bu metod ularga qiyinchilik tug'dirmasdan, o'rganilgan bilimni yanada mustahkamlashga yordam berishi kitob yozilishi jarayonida amalda qo'llanilganda o'z tasdig'ini topgan.

Mustaqil bajarilgan mashqlarning to'g'ri yechilganligini muntazam tekshirib borilishi kitob samaradorligini yanada oshiradi.

Kitob maktabdagi to'garak mashg'ulotlarida, repetitorlik kurslarida, shuningdek, uy sharoitida ota-onalar ko'magida foydalanish uchun mo'ljallangan. Bunda ustozning aralashuvini imkon qadar kamaytirishga harakat qilingan. Qo'llanmadan maktab mavzulariga moslab foydalanish ham mumkin, ammo uni bir boshidan izchil o'rganilsa maqsadga muvofiqroq bo'ladi.

Mazkur qo'llanma 2-sinf o'quv dasturiga asoslangan bo'lsa-da, 3-sinf o'quvchilari uchun ham bilimlarni mustahkamlash vositasi sifatida tavsiya etiladi.

"Ustoz-Ko'makchi" metodik markazi ushbu qo'llanma yuzasidan barcha ustozlar bilan tajriba almashishni taklif etadi. Qo'llanma samaradorligini oshirish bo'yicha o'z taklif va mulohazalaringiz bo'lsa [@ustozkomakchi_admin](https://t.me/ustozkomakchi_admin) telegram manziliga jo'natishingiz mumkin.

Bu qo'llanma muallif mulkidir. Uni ruxsatsiz tijorat maqsadida nusxalash taqiqlangan. Sotib olish imkoni cheklanganda o'quvchi o'z ehtiyoji uchun nusxalashi mumkin.

"Ustoz-Ko'makchi" metodik markazi ta'lim rivoji yo'lida:

- o'qituvchiga,
- o'quvchiga,
- ota-onaga ko'makchidir!



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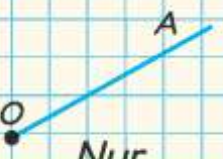


32-Dars

Nuqta, chiziqlar, kesma va nur

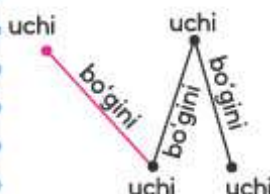


Quyida kelgan shakllarning xossalarini yaxshilab o'rganib olsangiz, mavzuga doir mashqlarni qiynalmasdan bajarasiz.

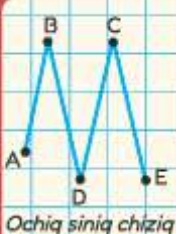
 Nuqta	Bu — nuqta. U geometrik shakllarning eng kichigidir.	Nuqtani hosil qilish uchun ruchka yoki qalam uchini oq qog'ozga tekizishingiz kifoya.	Uni odatda katta lotin harflari bilan nomlashadi. (A nuqta, B nuqta kabi)
 to'g'ri chiziq	Buning nomi — AB to'g'ri chiziq. U ikkala tomonga qarab cheksiz davom etadi. Uni ba'zan kichik lotin harflari bilan ham nomlashadi.	To'g'ri chiziqlar o'zaro kesishadigan bo'lsa faqat bittagina nuqtada kesisha oladilar. 	Bunday to'g'ri chiziqlar hech qachon kesishmaydi. Ular parallel to'g'ri chiziqlar deb ataladi. 
 Kesma	Buning nomi — AB kesma.	Kesmaning to'g'ri chiziqdan farqi shundaki, u ikkala tomondan ham chegaralangan bo'ladi.	A va B nuqtalar orasidagi masofa — kesmaning uzunligini bildiradi.
 Nur	Bu esa OA nomli nur bo'lib, "O" nuqta uning uchi hisoblanadi.	Kesmadan farqi shuki, nurning birgina tomoni chegaralangan bo'ladi.	U quyoshdan chiquvchi nurga ham o'xshaydi. 



Siniq chiziq bir nechta kesmalar-ning ketma-ket ulanishidan hosil bo'ladi.



Nuqtalar siniq chiziqning **uchlari**, kesmalar esa **bo'g'inlari** deyiladi.



Siniq chiziqlar ikki xil bo'ladi: **ochiq** va **yopiq** siniq chiziqlar.

Bo'g'inlari uzunliklarining yig'indisi **siniq chiziqning uzunligi** deyiladi.

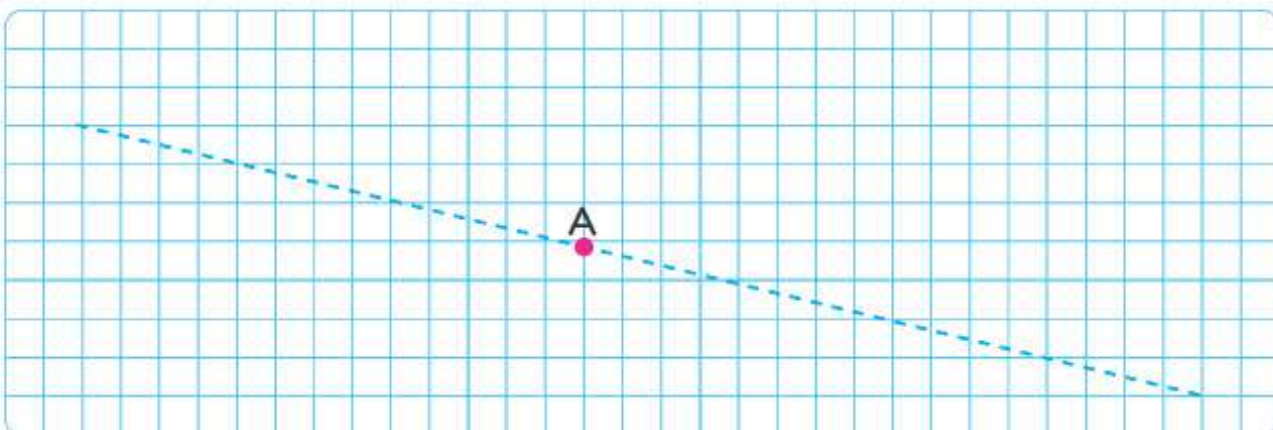
Yopiq siniq chiziqlardan ko'pburchaklar hosil qilish mumkin (uchburchak, beshburchak va hokazo).



Egri chiziqlar o'z nomiga mos — egri ko'rinishda bo'ladi.

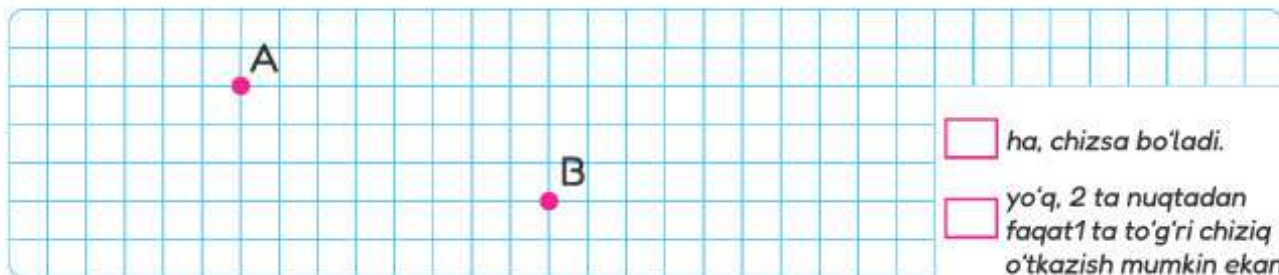
1

Chizg'ichni uzoq chiziq yoniga qo'yib, chiziq ustidan ruchka bilan chizing. A nuqtadan o'tuvchi bitta to'g'ri chiziq hosil bo'ldi, to'g'rimi? A nuqta orqali o'tuvchi yana 3 ta to'g'ri chiziq chizing.

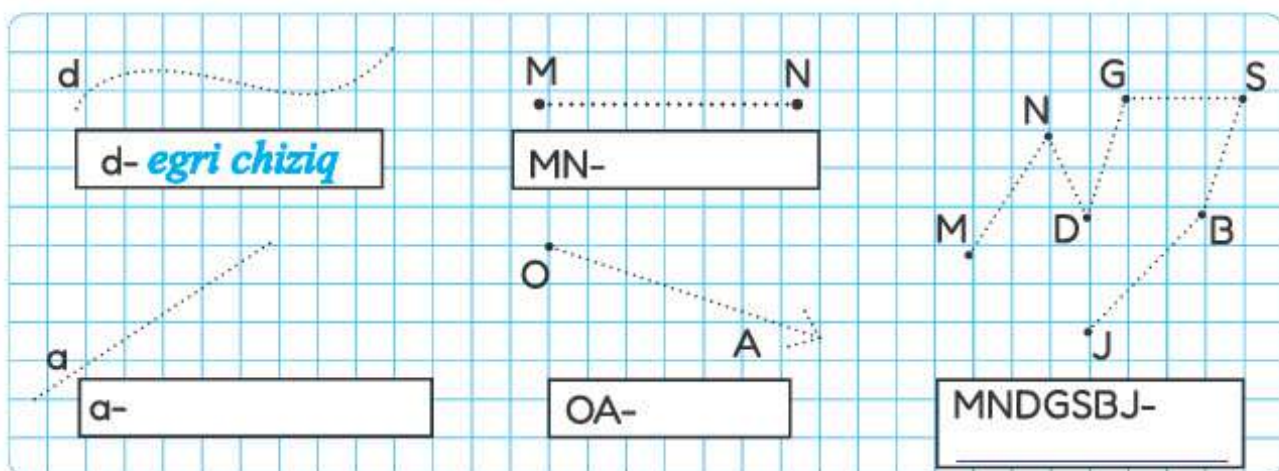




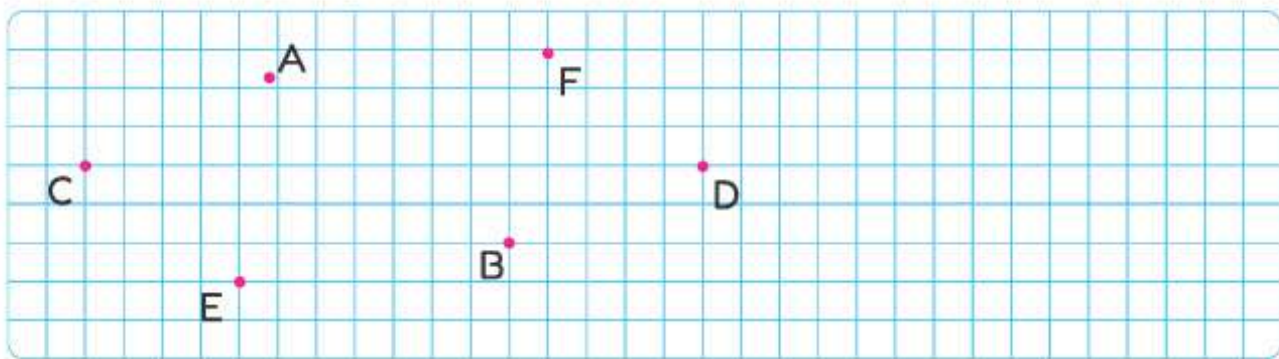
- 2 A va B nuqtalar orqali o'tuvchi to'g'ri chiziq chizing. Shu ikkala nuqtadan o'tuvchi yana bitta to'g'ri chiziq chizsa bo'ladimi?



- 3 Berilgan uzunq chiziqlar ustidan har xil rangdagi chiziqlar torting. Ularning yoniga nomlarini yozing.



- 4 Berilgan nuqtalarni tutashtirish orqali AB to'g'ri chiziq, CD kesma va EF nur hosil qiling. Ular kesishgan nuqtani "O" deb belgilang.





- 4 Berilgan burchaklarning turiga mos kelmaydigan so'zlarning ustidan chizing.

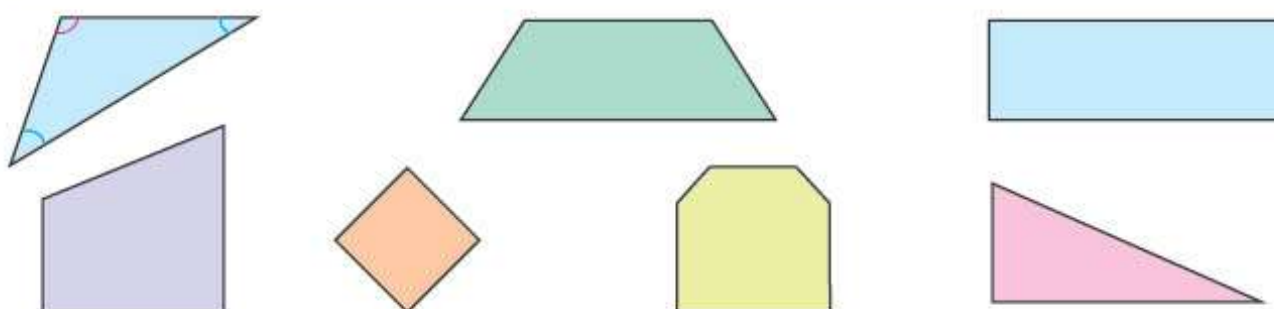


O'tkir O'tmas To'g'ri

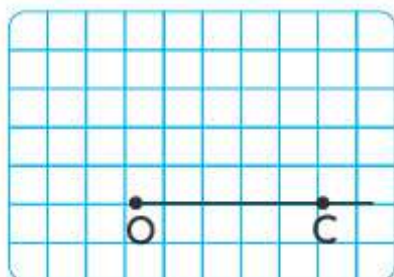
O'tkir O'tmas To'g'ri

O'tkir O'tmas To'g'ri

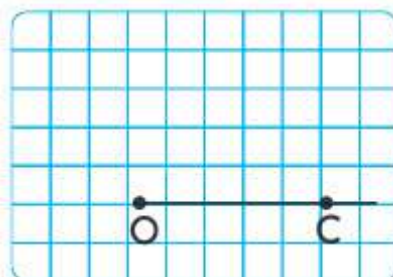
- 5 Berilgan shakllardan o'tmas burchaklarni ko'k rangdagi "  " belgi bilan, o'tkir burchaklarni qizil rangdagi "  " belgi bilan, to'g'ri burchaklarni esa "  " belgi bilan belgilab chiqing.



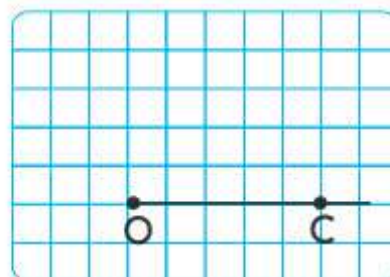
- 6 B nuqtani shunday qo'yingki COB o'tkir burchak hosil bo'lsin.



- D nuqtani shunday qo'yingki COD o'tmas burchak hosil bo'lsin.



- E nuqtani shunday qo'yingki COE to'g'ri burchak hosil bo'lsin.



34-Dars

Yassi va hajmli shakllar



Yassi shakllar –

- tekislikka yopishgan shakllardir.
- ularning bo'yi va eni bo'ladi, ammo balandligi bo'lmaydi.
- yassi shakllarni qog'ozga chizish mumkin.

Yassi shakllarga misollar:

- Uchburchak,
- to'rtburchak,
- beshburchak,
- oltiburchak va hokazo.

Hajmli shakllar –

Hajmli shakllar tekislikdan bo'rtib chiqqan bo'ladi, chunki ularning eni va bo'yidan tashqari balandligi ham mavjud.

Atrofimizda hajmli shaklga ega buyumlar juda ko'p. Masalan:

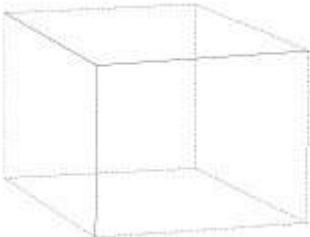
- Kubikli o'yinchoqlar – kub shaklida;
- Gugurt qutisi – parallelepiped shaklida;
- Stakan – silindr shaklida;
- Koptok – shar shaklida;

Yassi shakllar			Hajmli shakllar		
Uchburchak			Kub		
To'g'ri to'rtburchak			Piramida		
Kvadrat			Silindr		
Oltiburchak			Shar		
Doira			Konus		
Oval			Kuboid (to'g'ri burchakli parallelepiped)		

1 Chizilgan shakllarning nomini topib tutashtiring. Ularning turini aniqlang.

	Shakl	Hajmli	Yassi
To'rtburchak		✓	
Silindr			
Romb			
Piramida			
Shar			
Kvadrat			
Prizma			
Oval			
Aylana			
Kub			

2 Uzuq chiziq bo'ylab shaklni chizing. Kerakli joylarda chizg'ich ishlating. Shaklning nomini va turini yozing.

Shakl	Shaklning nomi	Shaklning turi
	_____	_____

37-Dars

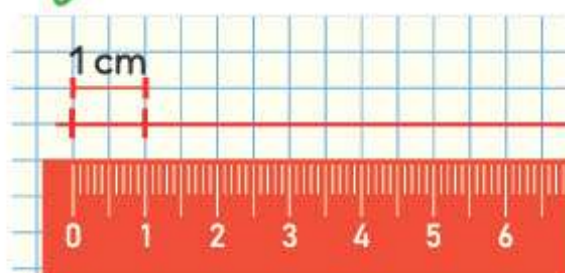
Uzunlik o'lchov birligi – santimetr



Atrofimizdagi har bir narsa ma'lum bir uzunlikka ega. Nimadir kaltaroq, nimadir uzunroq. Pashsha, o'chirg'ich, qalam, daftar kabi kichik narsalarning ham, mashina, gilam, tog', daryo kabi yirik narsalarning ham o'z uzunligi bor. Kichik narsalarni odatda **santimetr** deb nomlanuvchi o'lchov birligi bilan o'lchaymiz. Chizg'ichda ketma-ket yozilgan sonlar orasida 1 santimetr uzunlik bor. Santimetr qisqacha "**cm**" deb yoziladi.

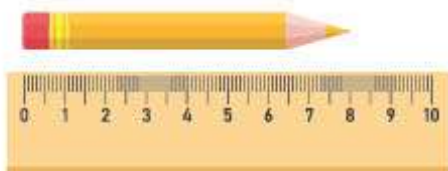


Odatda daftar kataklaridan
2 tasining uzunligi
1 santimetrga teng bo'ladi.

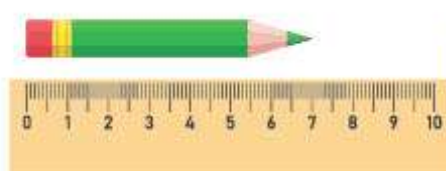


1

Qalamlarning uzunligini yozing.



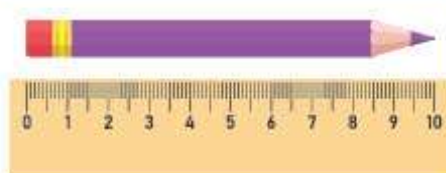
8 cm



cm



cm



cm

1 Quyidagi o'yinchoq transportlarning uzunligini toping.



_____ cm



_____ cm



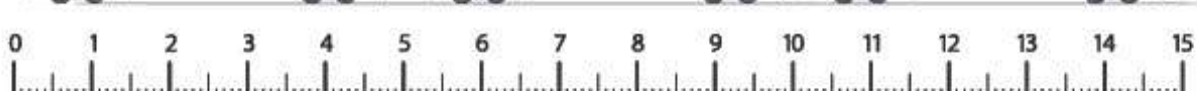
_____ cm



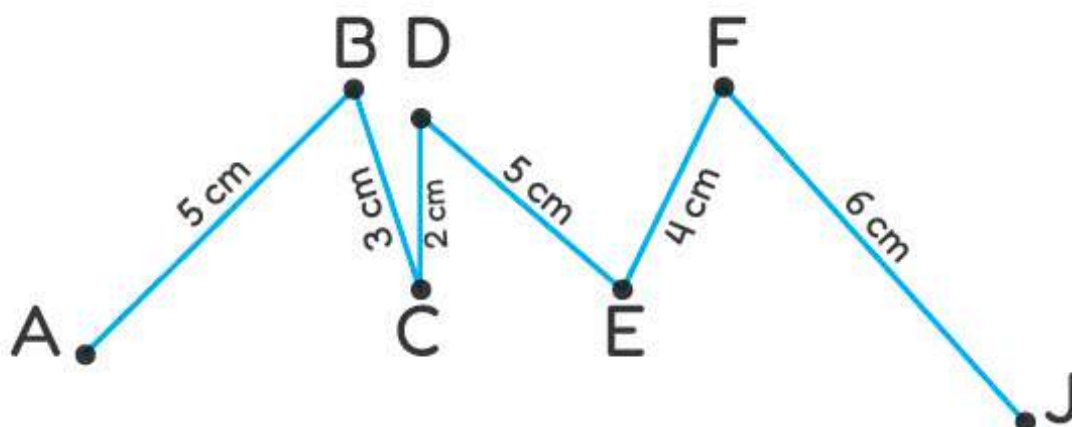
_____ cm



_____ cm

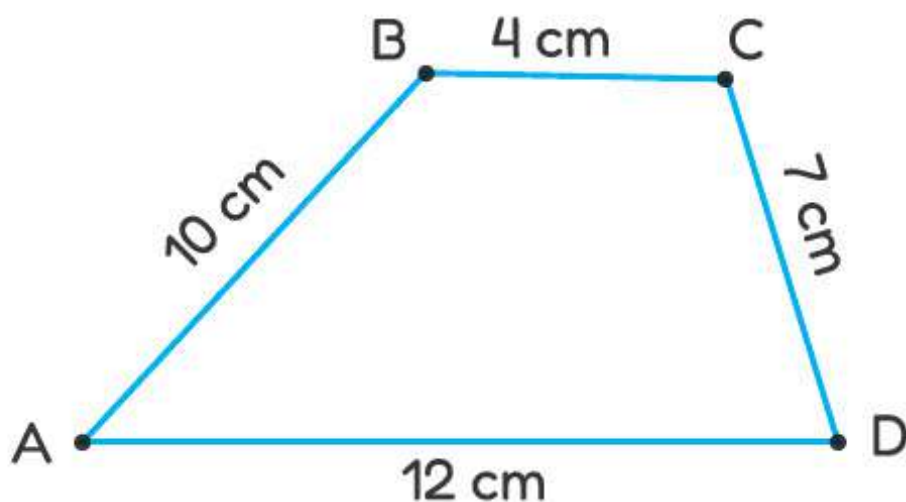


- 5 Berilgan o'lchamlarga ko'ra siniq chiziqlarning uzunligini toping.



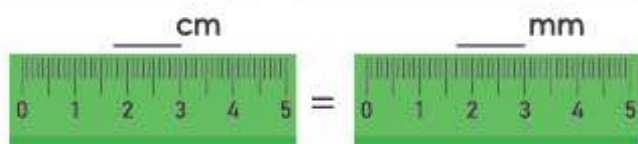
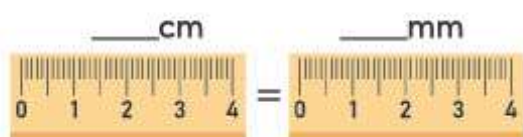
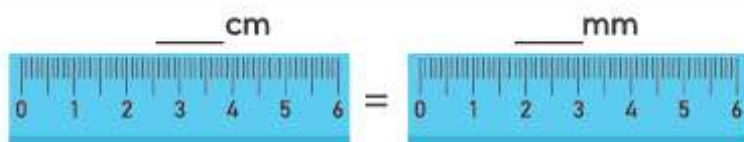
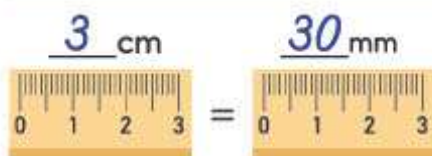
$$AB + BC + CD + DE + EF + FJ = \square + \square + \square + \square + \square + \square = \square \text{ cm}$$

- 6 Berilgan o'lchamlarga ko'ra yopiq siniq chiziqlarning uzunligini toping.



$$\square \text{ cm} + \square \text{ cm} + \square \text{ cm} + \square \text{ cm} = \square \text{ cm}$$

1 Berilgan uzunliklarni namunadagidek ifodalang.



2 Quyida berilgan narsalarning uzunligiga mos o'lchov birligini namunadagidek belgilang.

Ko'rsatkich barmoq
uzunigi:



5

mm

cm

Qalamning uchi:



1

mm

cm

Kitobning eni:



20

mm

cm

O'chirg'ichning bo'yi:



29

mm

cm

3 Santimetrlarni millimetrlarda, millimetrlarni esa santimetrlarda ifodalang.

1 cm = 10 mm

10 cm = ___ mm

10 mm = 1 cm

90 mm = ___ cm

3 cm = ___ mm

17 cm = ___ mm

20 mm = ___ cm

100 mm = ___ cm

5 cm = ___ mm

20 cm = ___ mm

40 mm = ___ cm

200 mm = ___ cm

7 cm = ___ mm

61 cm = ___ mm

50 mm = ___ cm

720 mm = ___ cm

4 cm = ___ mm

100 cm = ___ mm

70 mm = ___ cm

1000 mm = ___ cm



40-Dars

Metr

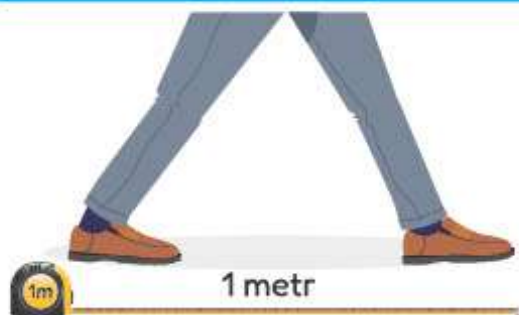


Biz qalamning uchi, chumoli kabi eng kichik narsalarni **mm** da, undan kattaroq kitob, qalam kabi narsalarni **cm** va **dm** da o'lchashni bilib oldik. Bunda biz asosan chizg'ichdan foydalandik.

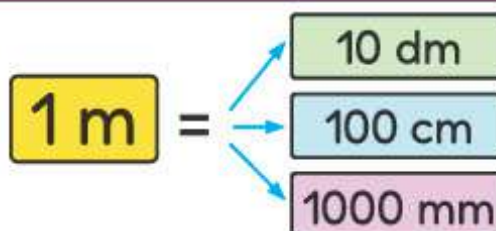
Shkafning, sinf xonasining uzunligini agar biz santimetrda o'lchab chiqsak bu bizga anchagina qiyinchilik tug'diradi. Sinf xonasidan sport zaligacha bo'lgan uzunlikni o'lchash esa undan ham qiyin, shundaymi?

Bu kabi uzunliklarni o'lchashda biz **METR** dan foydalanamiz. Uni qisqartirib **m** deb yoziladi.

Metrni o'lchashni o'z asboblari bor. Bu asboblardan ko'proq qurilish ishlarida va tikish-bichishda foydalaniladi.



1 metr = 10 detsimetr = 100 santimetr



1 Quyida qiziqarli faktlar keltirilgan. mm cm m o'lchov birliklaridan mos keladiganini yozsangiz ajoyib ma'lumotlarni bilib olasiz.

1. Kichik chumolining uzunligi o'rtacha 3
2. Hozirgi kunda dunyoda eng bo'yi uzun odam Turkiyada yashaydi. Uning uzunligi 2 51 cm
3. Dunyodagi eng past bo'yli odam yarim metrdan uzunroq, 1 metrdan kaltaroq, aniqrog'i 61
4. Dunyoda qancha yomg'ir yog'sa ham ikkita bir xil yomg'ir tomchisi bo'lmasligini olimlar aniqlashgan. Eng katta yomg'ir tomchisi ham 1 cm dan kichik bo'ladi. Ularning uzunligi turlicha bo'lib, 1 dan 6 gacha bo'ladi.

2 Usta uzunliklarni santimetrda o'lchab yozdi. Siz uni metr, detsimetr, santimetr o'lchov birliklarida namunadigidek ifodalang.

Derazaning eni - 132 cm = 1 m 3 dm 2 cm

Derazaning bo'yi - 165 cm = m dm cm

Sinf xonasining eni - 550 cm = m dm cm = m dm

Sinf xonasining uzunligi - 805 cm = m dm cm = m cm

3 Qo'lingizga chizg'ichni olib o'zingiz o'lchab yozing.

Sinf partasining eni - cm = 0 m dm cm = dm cm

Sinf partasining bo'yi - cm = m dm cm

Sinf partasining balandligi - cm = dm cm

45-Dars
Bo'lish. Sonlarni ikkiga bo'lish


Matematikada bor yo'g'i 4 ta amal bor. Siz bilan hozirgacha ulardan uchtasini – qo'shish (+), ayirish (–) va ko'paytirish (·) ni o'rganib oldik. O'rganmaganimiz faqat **bo'lish** (:) amaligina qoldi. Bo'lish amali ko'paytirish amaliga teskari amal hisoblanadi.

Masalan:

$3 \cdot 4 = 12;$

$12 : 4 = 3;$

$12 : 3 = 4$

Bo'lish amali – bu sonni teng qismlarga ajratuvchi amal.

1

Rasmdagi olmalarni namunadagi kabi qizil chiziq bilan teng ikkiga bo'lamiz. Amal va sonlarda ifodalaymiz.



$4 : 2 = 2$



$6 : 2 = \square$



$\square : 2 = \square$



$\square : \square = \square$

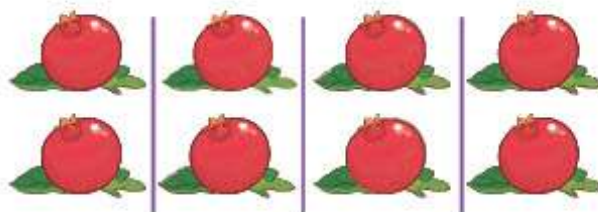
2

Rasmga qarab bo'lishni o'rganamiz.

1) *Namuna.*

Anorlarni 2 tadan qilib
guruhlarga ajrating.
Nechta guruh hosil bo'ldi?

$$8 : 2 = 4$$



2) Anorlarni 2 tadan qilib
guruhlarga ajrating.
Nechta guruh hosil bo'ldi?

$$6 : 2 = \square$$



3) Gullarni 3 tadan qilib
guruhlarga ajrating.
Nechta guruh hosil bo'ldi?

$$\square : 3 = \square$$



4) Globuslarni 5 tadan qilib
guruhlarga ajrating.
Nechta guruh hosil bo'ldi?

$$\square : \square = \square$$



5) Koptoklarni 4 tadan qilib
guruhlang.
Nechta guruh hosil bo'ldi?

$$\square : \square = \square$$



1 Metrda berilgan uzunlik o'lchovlarini kilometrda ifodalang.

$$1000 \text{ m} = 1 \text{ km}$$

$$2300 \text{ m} = 2 \text{ km } 300 \text{ m}$$

$$4000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

$$3360 \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

$$5000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

$$4145 \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

$$8000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

$$8211 \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

2 Masofalarni metrda ifodalang.

$$1 \text{ km} = \underline{\hspace{1cm}} \text{ m}$$

$$5 \text{ km } 112 \text{ m} = \underline{\hspace{1cm}} \text{ m}$$

$$1 \text{ km } 400 \text{ m} = \underline{\hspace{1cm}} \text{ m}$$

$$8 \text{ km } 205 \text{ m} = \underline{\hspace{1cm}} \text{ m}$$

3 Hisoblang.

$$1 \text{ km} - 700 \text{ m} = \underline{\hspace{1cm}} \text{ m} - 700 \text{ m} = \underline{\hspace{1cm}} \text{ m}$$

$$2 \text{ km} - 900 \text{ m} = \underline{\hspace{1cm}} \text{ m} - 900 \text{ m} = \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

$$2 \text{ km } 200 \text{ m} - 200 \text{ m} = \underline{\hspace{1cm}} \text{ m} - 200 \text{ m} = \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

$$415 \text{ m} + 585 \text{ m} = \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

$$400 \text{ m} + 850 \text{ m} = \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

$$1 \text{ km } 500 \text{ m} + 7 \text{ km } 500 \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

$$4 \text{ km } 400 \text{ m} + 900 \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

4 Hisoblang.

$$10 \times 100 \text{ m} = \underline{1000} \text{ m} = \underline{1} \text{ km}$$

$$20 \times 110 \text{ m} + 500 \text{ m} = \underline{\hspace{1cm}} \text{ m} + 500 \text{ m} = \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km } \underline{\hspace{1cm}} \text{ m}$$

$$300 \text{ m} + 15 \times 10 \text{ m} = \underline{\hspace{1cm}} \text{ m} + \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ m}$$

$$6 \text{ km} - 20 \times 200 \text{ m} - 1500 \text{ m} = \underline{\hspace{1cm}} \text{ m} - \underline{\hspace{1cm}} \text{ m} - \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ m}$$

$$8 \text{ km } 200 \text{ m} - 3 \times 400 \text{ m} = \underline{\hspace{1cm}} \text{ m} - \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ m} = \underline{\hspace{1cm}} \text{ km}$$

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