

**Uchburchakning balandligi, medianasi va bissektrisasi.
To'g'ri burchakli uchburchak.**



Nagima



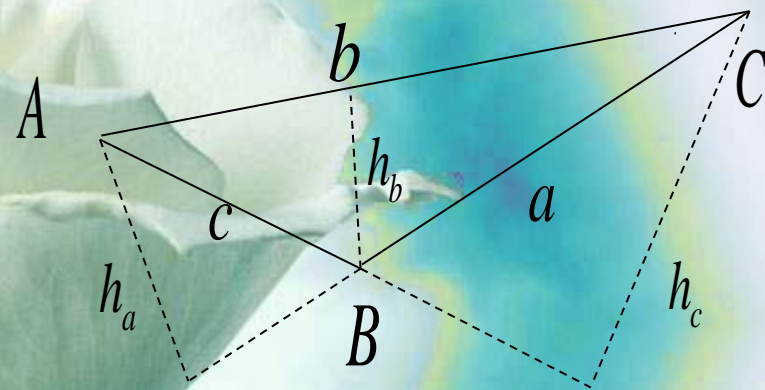
Reja:

- Uchburchak
- Uchburchak medianasi, balandligi va bissektrisasi
- To'g'ri burchakli uchburchak
- To'g'ri burchakli uchburchak xossalari
- To'g'ri burchakli uchburchakning o'xshashlik alomatlari

Nagima



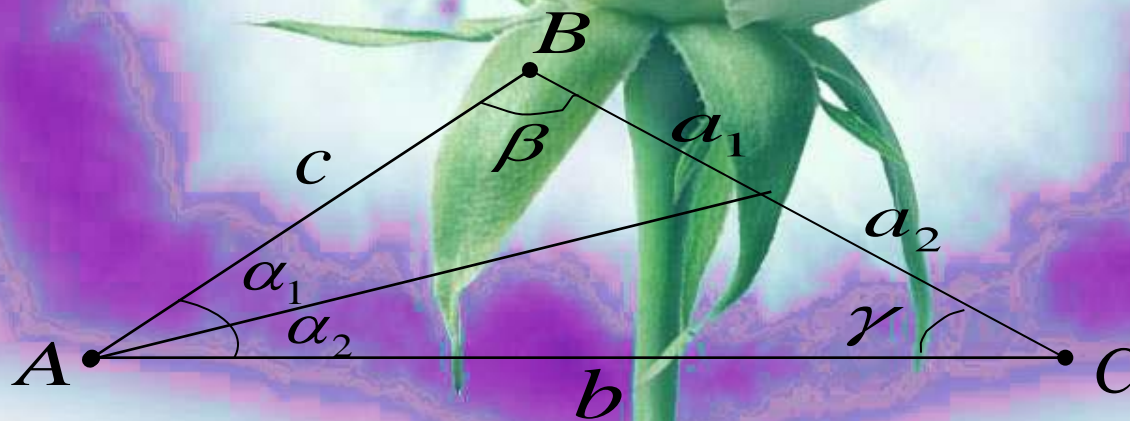
- Uchburchakning berilgan uchidan tushirilgan *balandligi* deb uchburchakning shu uchidan uning qarshisidagi tomonida yotgan to'g'ri chiziqqa tushirilgan perpendikulyarga aytiladi.



$$h_a = \frac{2S}{a} = b \sin C = c \sin B = \frac{2\sqrt{p(p-a)(p-b)(p-c)}}{a}$$

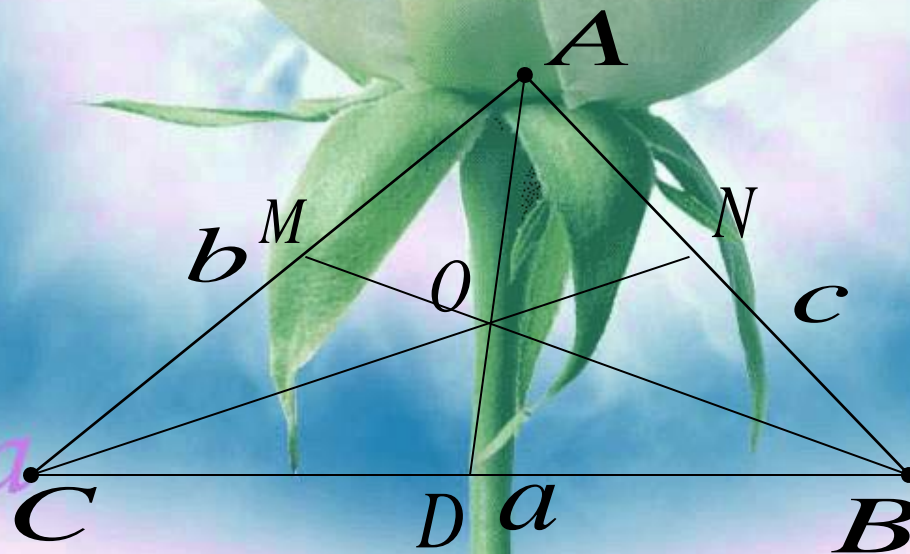
- Uchburchakda burchak uchidan chiqib, bu burchakni teng ikkiga bo'luvchi kesma uning *bissektrisasi* deyiladi.

$$l_a = \frac{2}{b+c} \sqrt{pbc(p-a)} = \frac{\sqrt{bc[(b+c)^2 - a^2]}}{b+c} = \frac{2bc \cos \frac{\alpha}{2}}{b+c}$$



- Uchburchakning berilgan uchidan tushirilgan *medianasi* uchburchakning shu uchini uning qarshisidagi tomon o'rtasi bilan tutashtiruvchi kesmaga aytiladi.

$$m_a = \frac{1}{2} \sqrt{2(b^2 + c^2) - a^2} = \frac{1}{2} \sqrt{b^2 + c^2 + 2bc \cos A}$$



To'g'ri burchakli uchburchak

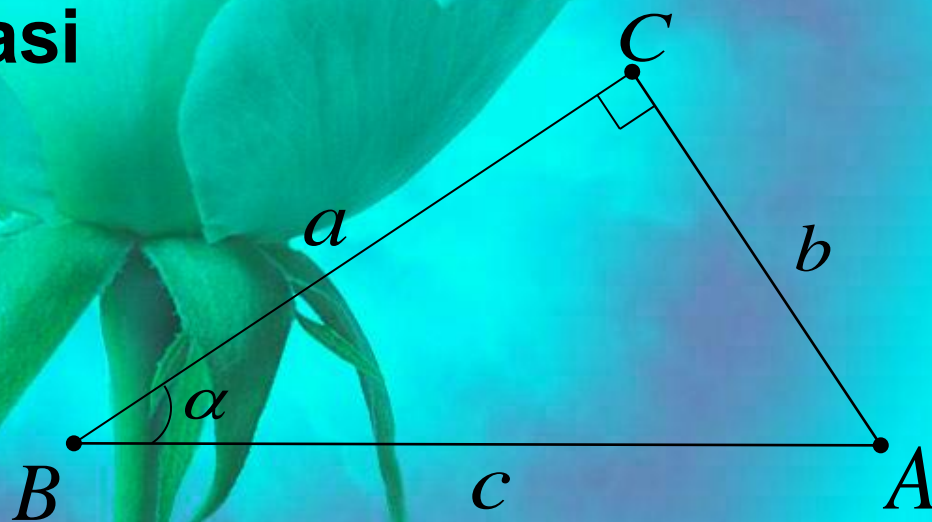
- Agar uchburchakning to'g'ri burchagi bo'lsa, u to'g'ri burchakli uchburchak deyiladi.
- Uchburchak burchaklarining yig'indisi 180° ga tengligi uchun to'g'ri burchakli uchburchakning faqat bitta to'g'ri burchagi bo'ladi. To'g'ri burchakli uchburchakning qolgan ikkita burchagi otkir burchaklardir. To'g'ri burchakli uchburchakning o'tkir burchaklari yig'indisi $180^\circ - 90^\circ = 90^\circ$ ga teng.



- To'g'ri burchakli uchburchakda to'g'ri burchakni tashkil qilgan tomonlar *katetlar*, to'g'ri burchak qarshisida yotgan tomon *gipotenuza* deb ataladi

Pifagor teoremasi

$$a^2 + b^2 = c^2$$



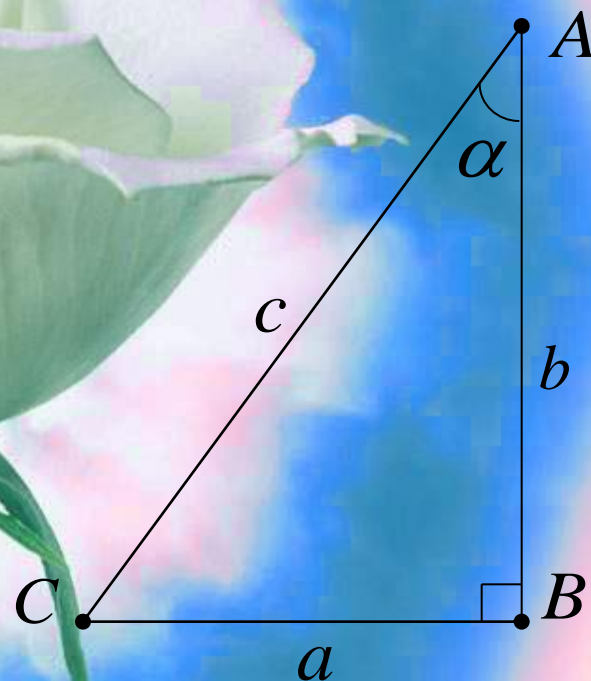
To'g'ri burchakli uchburchakda burchak $\sin \alpha$, $\cos \alpha$, tga va ctga

$$1) \sin \alpha = \frac{a}{c}$$

$$2) \cos \alpha = \frac{b}{c}$$

$$3) \operatorname{tga} \alpha = \frac{a}{b}$$

$$4) \operatorname{ctga} \alpha = \frac{b}{a}$$



To'g'ri burchakli uchburchak xossalari

- To'g'ri burchakli uchburchakda ikki o'tkir burchak yig'indisi 90° ga teng.
- To'g'ri burchakli uchburchakda 30° li burchak qarshisidagi katet gipotenuzaning yarmiga teng
- Agar to'g'ri burchakli uchburchakda katet gipotenuzaning yarmiga teng bo'lsa, katet qarshisidagi burchak 30° ga teng.



Foydalanilgan adabiyotlar:

- Geometriya. *Akademik litsey va kasb-hunar kollejlari uchun. H. M. Sayfullaeva.*
- Geometriyadan masalalar to'olami. *Akademik litsey va kasb-hunar kollejlari uchun o'quv qo'llanma. I. Isroilov, Z. A. Pashayev*
- **Pogarelov A. G. Geometriya, 7-11 sinf,**



A close-up photograph of several vibrant pink flowers, possibly plumerias, with a soft-focus green background. The text is overlaid on the flowers.

E'TIBORINGIZ UCHUN

RAHMAT