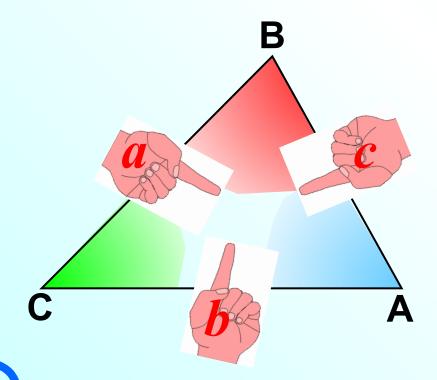
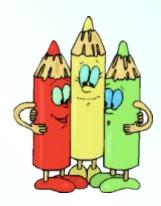
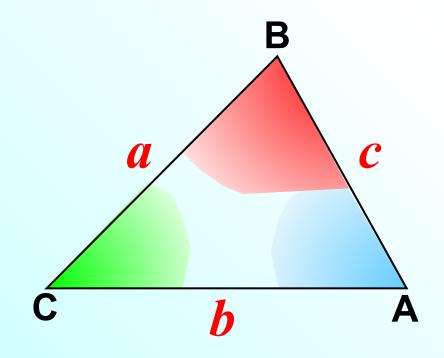


Теорема синусов

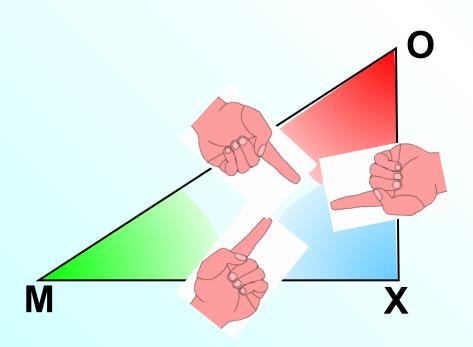
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$





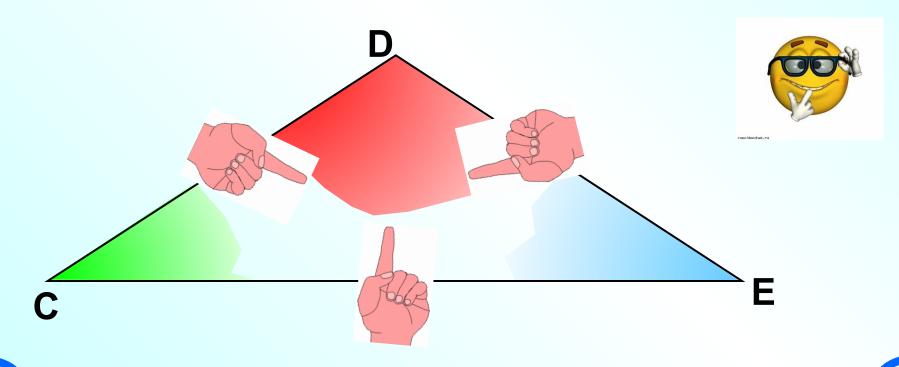


$$\frac{MO}{\sin X} = \frac{MX}{\sin O} = \frac{OX}{\sin C}$$





$$\frac{CD}{sinE} = \frac{EC}{sinD} = \frac{DE}{sinC}$$

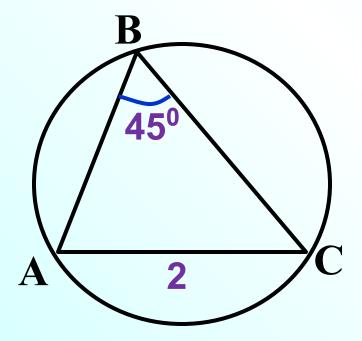


Следствие из теоремы синусов

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} = 2R = D$$

где *R* – радиус окружности, описанной около △ ABC

$3a_{A}$ (OГЭ №23) Найти радиус окружности, описанной около \triangle ABC, если AC = 2 см, \angle ABC = 45°



По следствию из теоремы

синусов
$$\frac{AC}{\sin B} = 2R \Longrightarrow$$

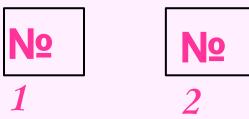
$$R = \frac{AC}{2\sin B}$$

$$R=2:(2\cdot\frac{\sqrt{2}}{2})$$

$$R = \sqrt{2}$$

Тригонометрическая

			T	абг	ш	1a			
α	0°	30°	45°	60°	90°	120°	135°	150°	180°
$\sin \alpha$	0	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0
$\cos \alpha$	1	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	0	$-\frac{1}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{3}}{2}$	-1
$\operatorname{tg} \alpha$	0	$\frac{\sqrt{3}}{3}$	1	$\sqrt{3}$	-	$-\sqrt{3}$	-1	$-\frac{\sqrt{3}}{3}$	0
$\operatorname{ctg} \alpha$	-	$\sqrt{3}$	1	$\frac{\sqrt{3}}{3}$	0	$-\frac{\sqrt{3}}{3}$	-1	$-\sqrt{3}$	-





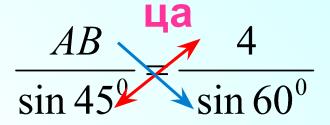


Nº

Задача

AB Q AC sinC sinB

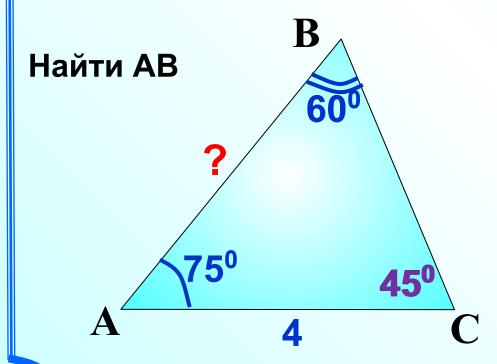
Табли



$$AB = 4 \cdot \sin 45^{\circ} : \sin 60^{\circ}$$

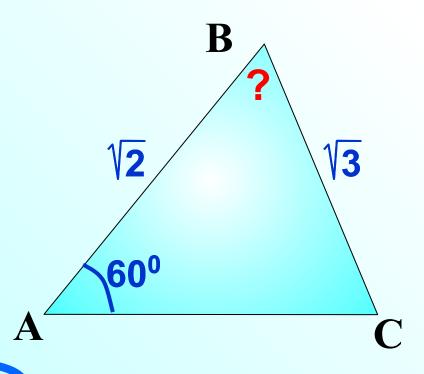
$$AB = 4 \cdot \frac{\sqrt{2}}{2} : \frac{\sqrt{3}}{2}$$

$$AB = \frac{4 \cdot \sqrt{2 \cdot 2}}{2 \cdot \sqrt{3}} = \frac{4\sqrt{6}}{3}$$



Задача

$$\frac{AB}{\sin C} = \frac{\mathbf{E}C2}{\sin A}$$



$$\frac{\sqrt{2}}{\sin C} = \sqrt{3}$$

$$\sin C = \sqrt{2} \cdot \sin 60^{\circ} : \sqrt{3}$$

$$\sin C = \sqrt{2} \cdot \frac{\sqrt{3}}{2} : \sqrt{3}$$

$$\sin C = \frac{\sqrt{2}}{2}$$

$$\angle C = 45^{\circ} \implies \angle B = 75^{\circ}$$

Табли



