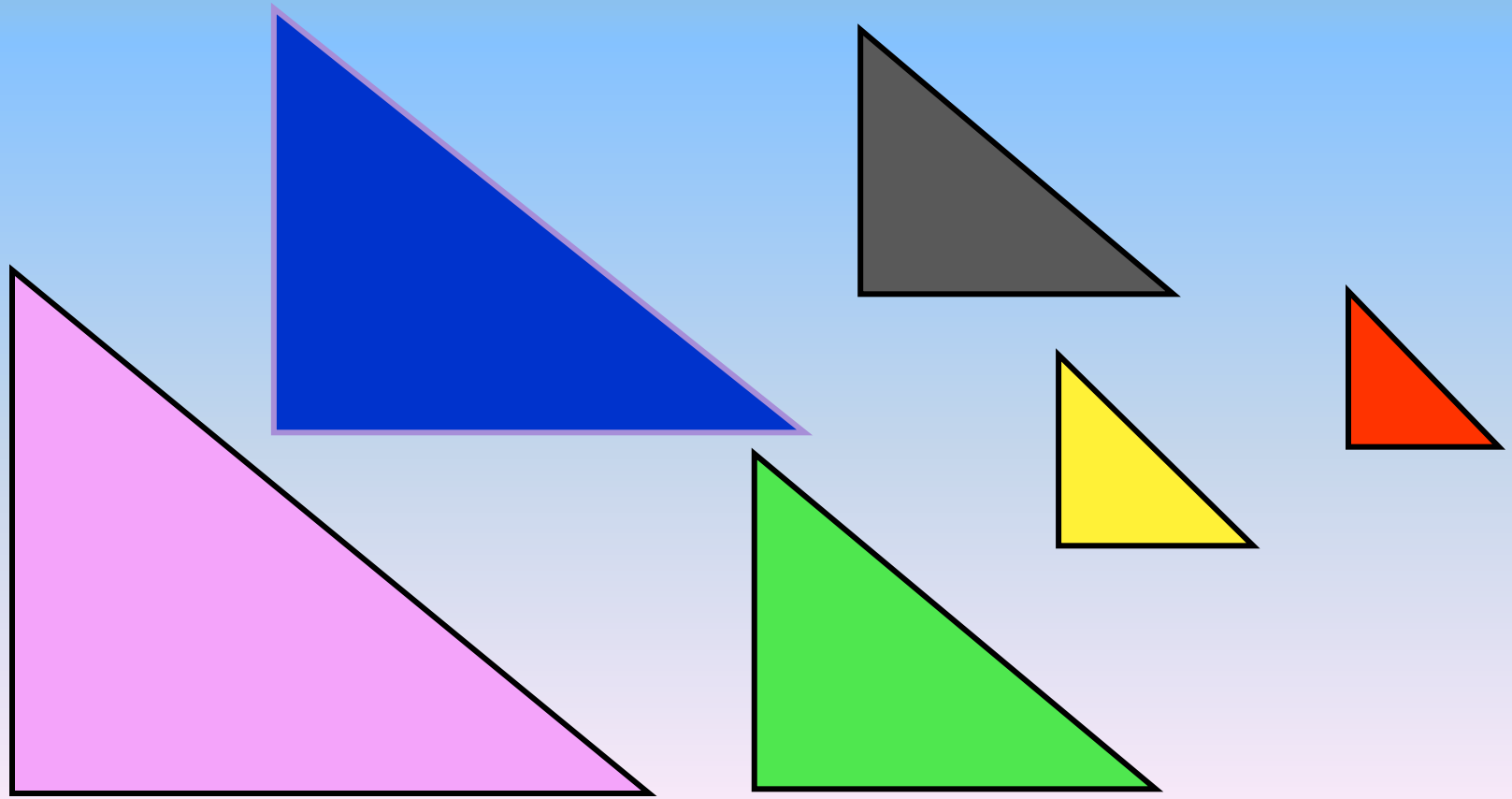
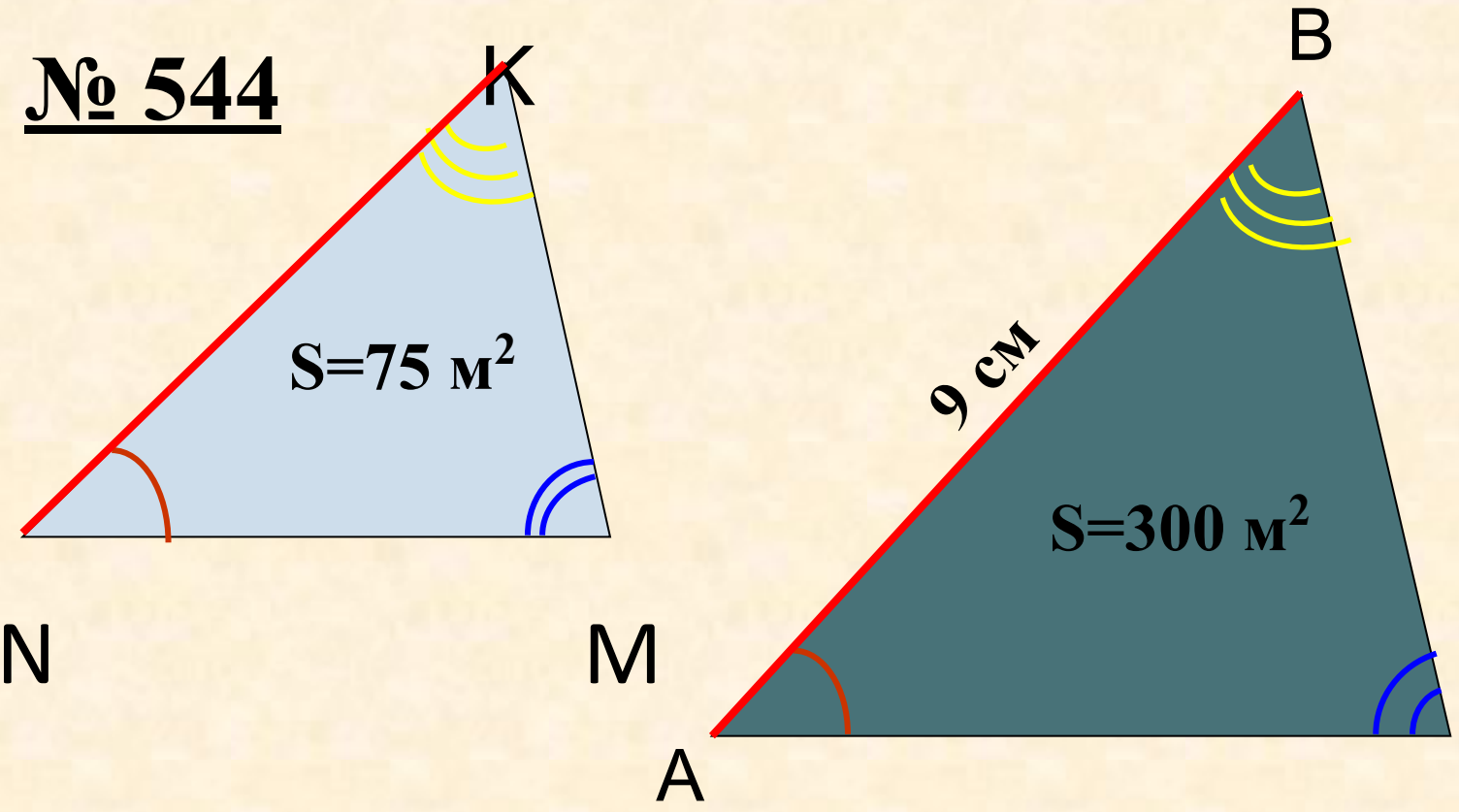
Первый признак подобия треугольников



Проверим домашнее задание

№ 544

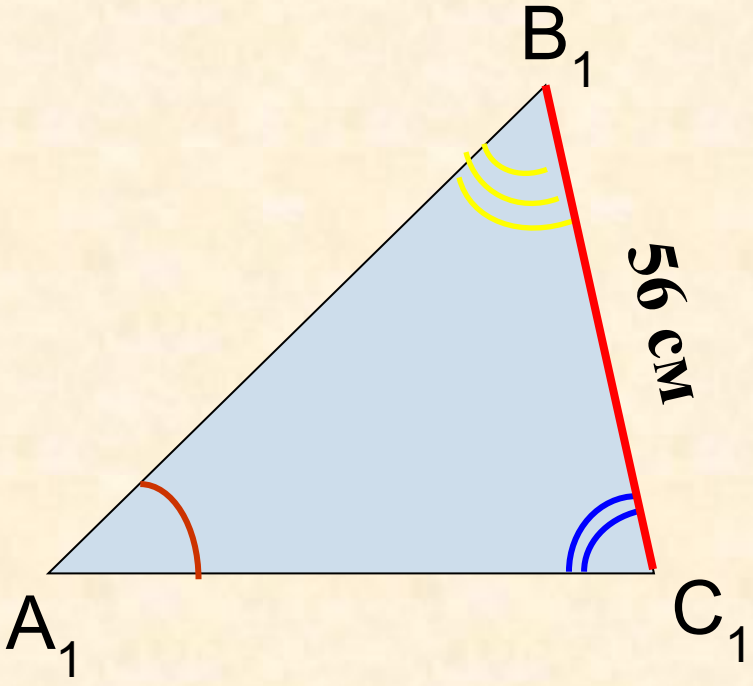


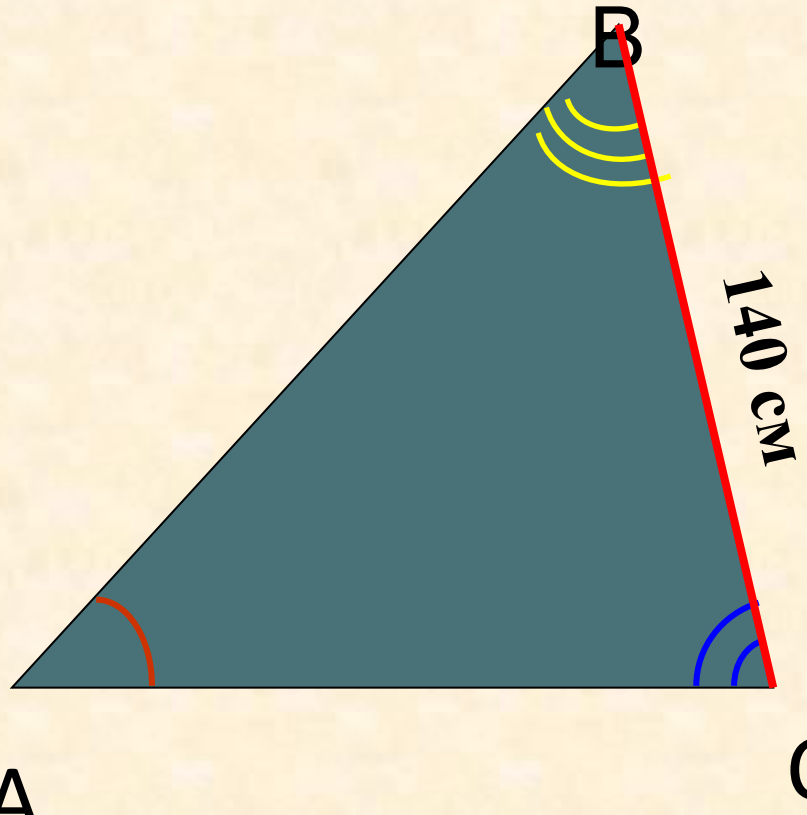
Найти: *NK*.

Решение: 1) Если $\Delta NKM \sim \Delta ABC$, то $\frac{S_{\Delta NKM}}{S_{\Delta ABC}} = k^2; \frac{S_{\Delta NKM}}{S_{\Delta ABC}} = \frac{75}{300} = \frac{1}{4};$

$k = \frac{1}{2};$ 2) $\frac{NK}{AB} = \frac{1}{2}; \frac{NK}{9} = \frac{1}{2};$ $NK = 4{,}5.$

№ 548



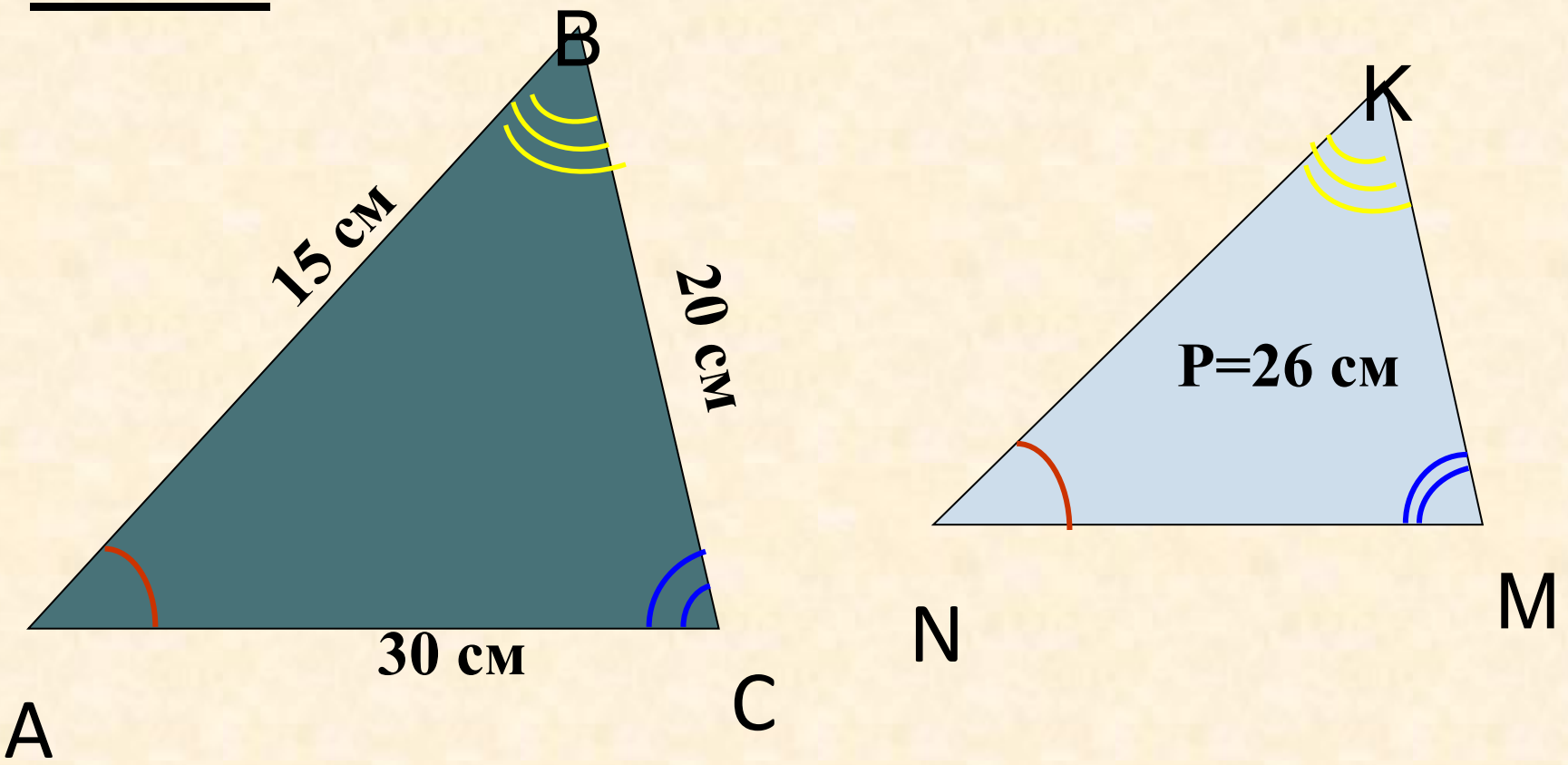


Найти: $\dfrac{P_{\Delta ABC}}{P_{\Delta A_1B_1C_1}}$.

Решение: Если $\Delta ABC \sim \Delta A_1B_1C_1$, то $\dfrac{P_{\Delta ABC}}{P_{\Delta A_1B_1C_1}} = k; \dfrac{BC}{B_1C_1} = \dfrac{140}{56} = 2{,}5 = k;$

$\dfrac{P_{\Delta ABC}}{P_{\Delta A_1B_1C_1}} = 2{,}5.$

№ 549



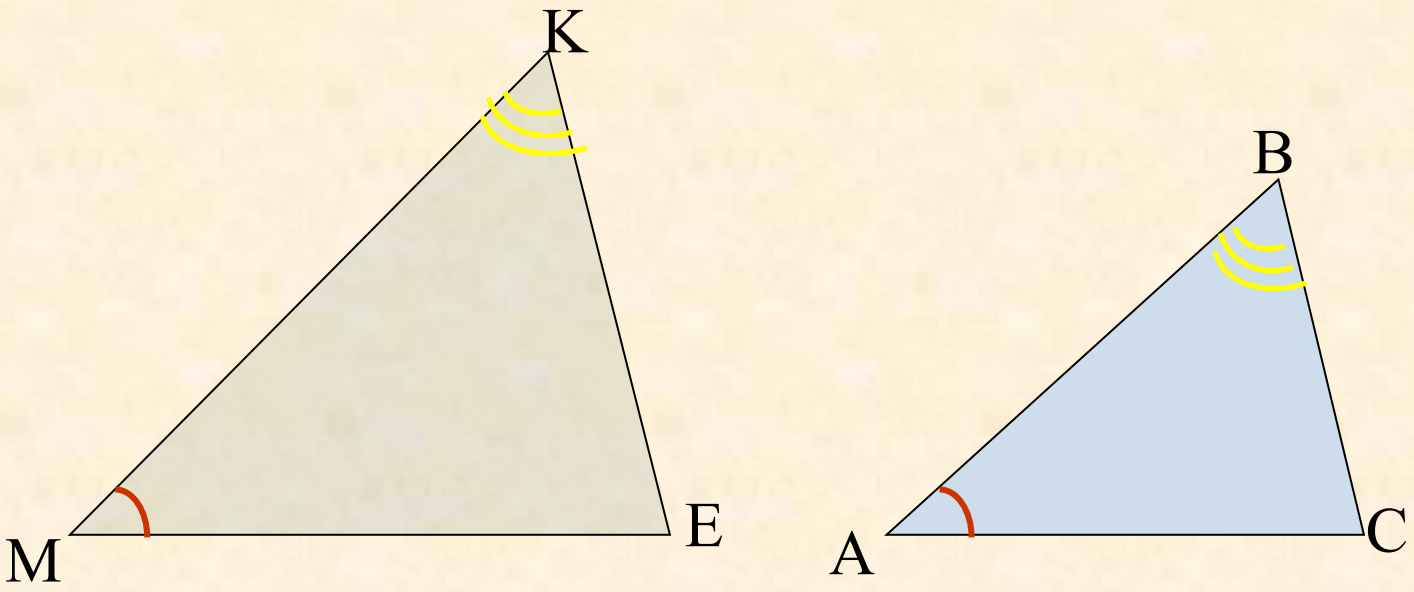
Найти: *NK, KM, NM.*

Решение: 1) Если $\Delta ABC \sim \Delta NKM$, то $\frac{P_{\Delta ABC}}{P_{\Delta NKM}} = \frac{65}{26} = 2{,}5 = k;$

2) $\frac{AB}{NK} = \frac{BC}{KM} = \frac{AC}{NM} = 2{,}5;\ \frac{15}{NK} = 2{,}5;\ NK = 6;\ \frac{20}{KM} = 2{,}5; KM = 8;\ NM = 12.$

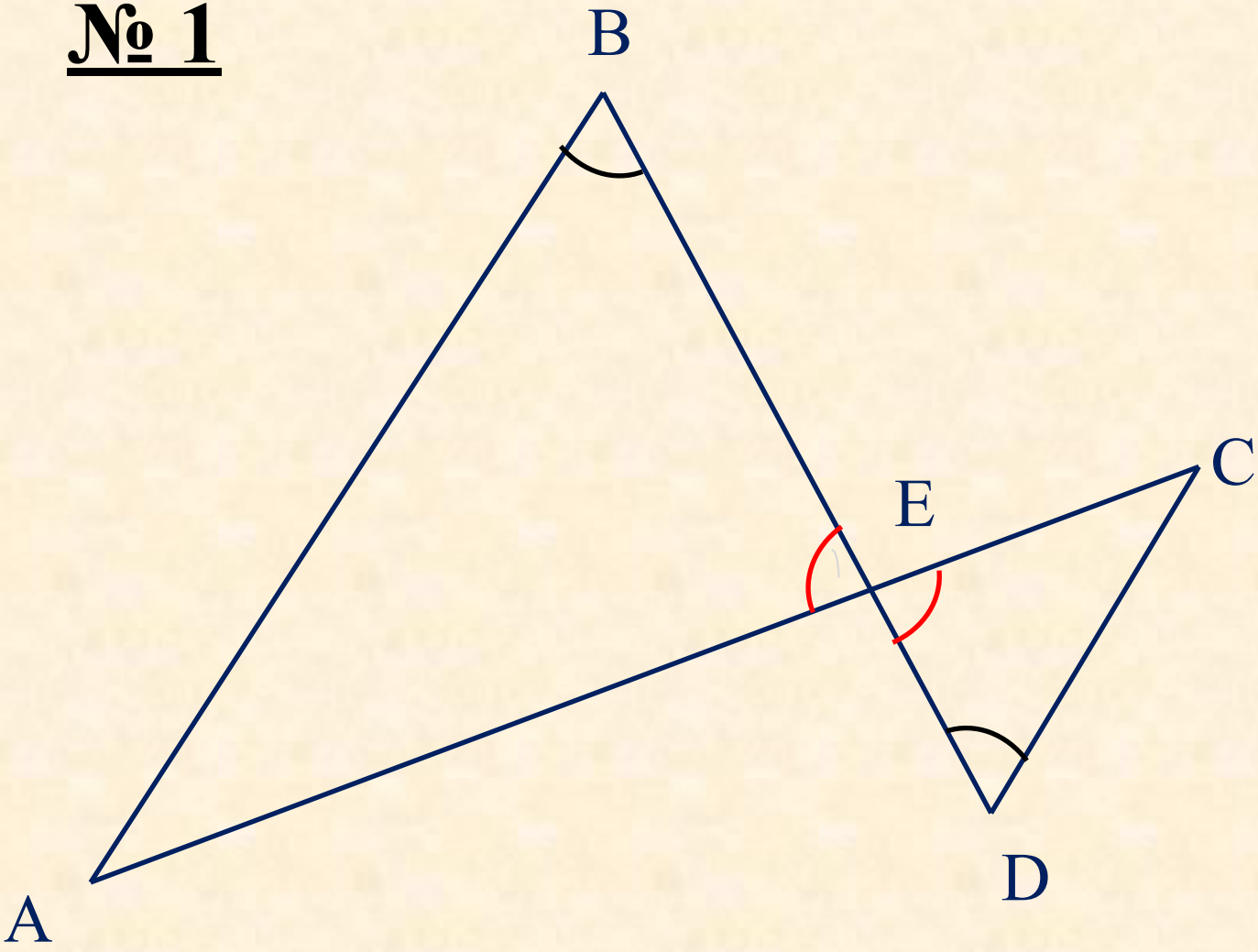
Теорема (первый признак подобия треугольников).

Если два угла одного треугольника соответственно равны двум углам другого, то такие треугольники подобны.



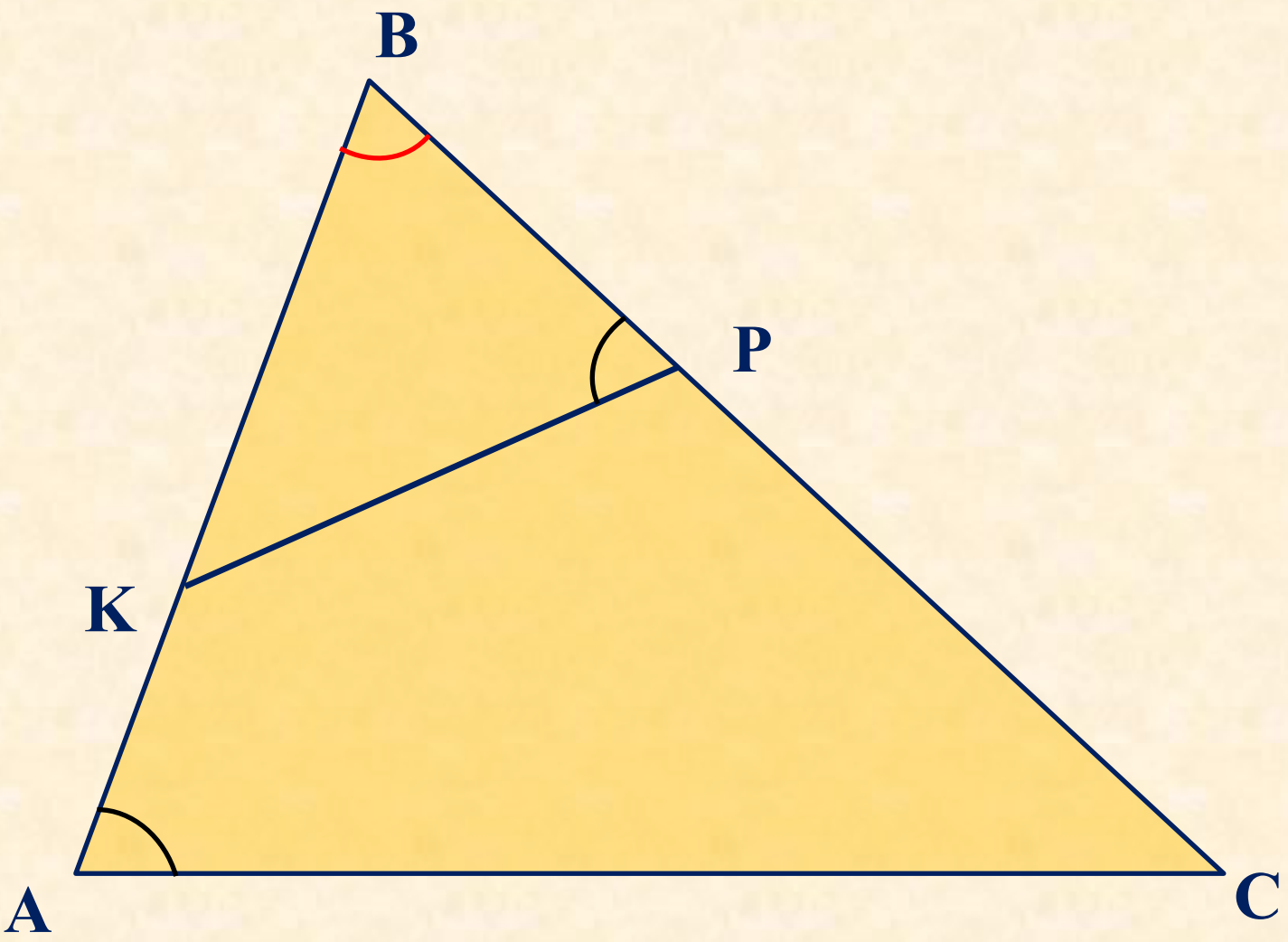
Если $\angle M = \angle A, \angle K = \angle B,$ то $\triangle MKE \sim \triangle ABC.$

№ 1

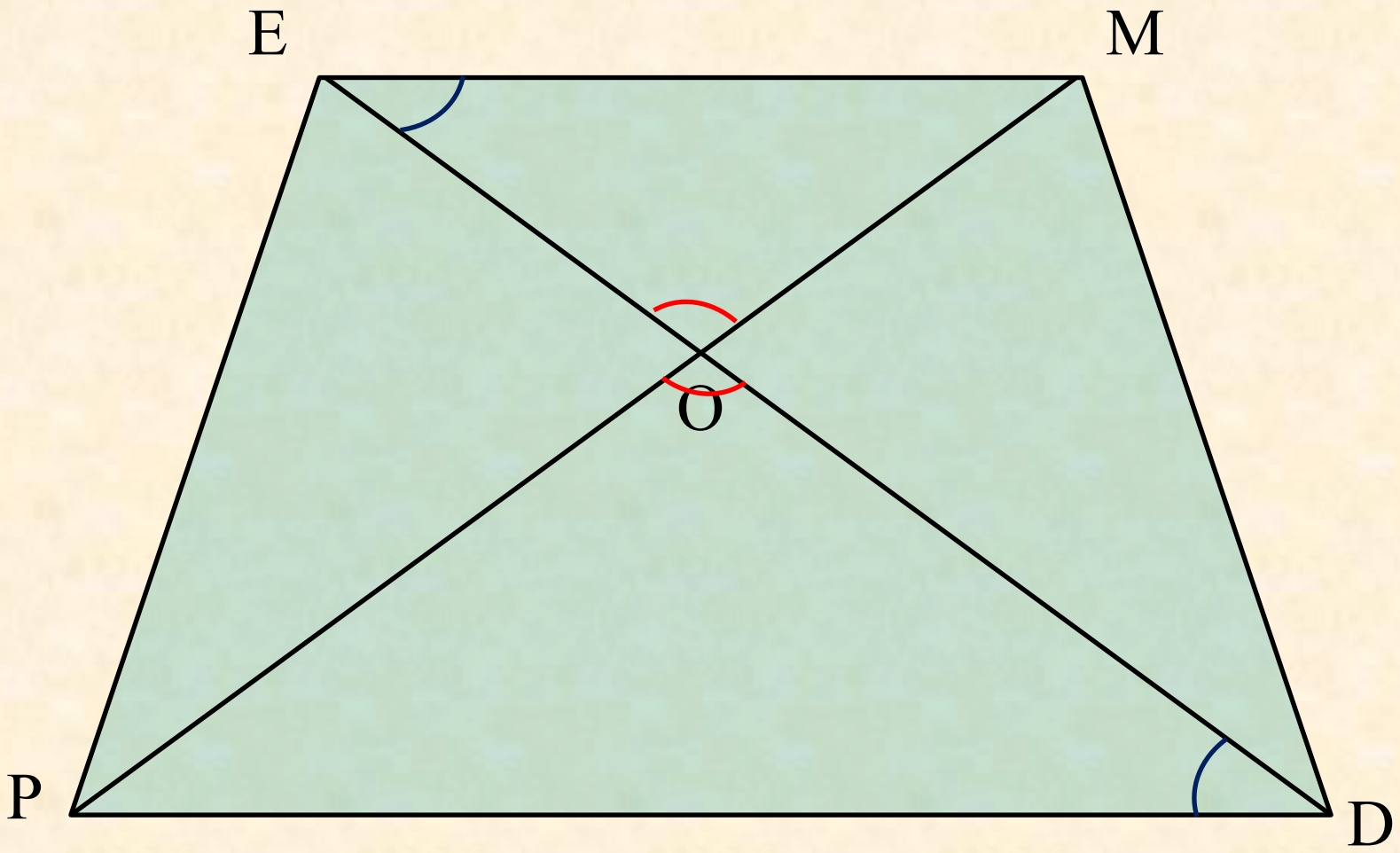


В задачах №1-№6 объяснить подобие треугольников.

№ 2

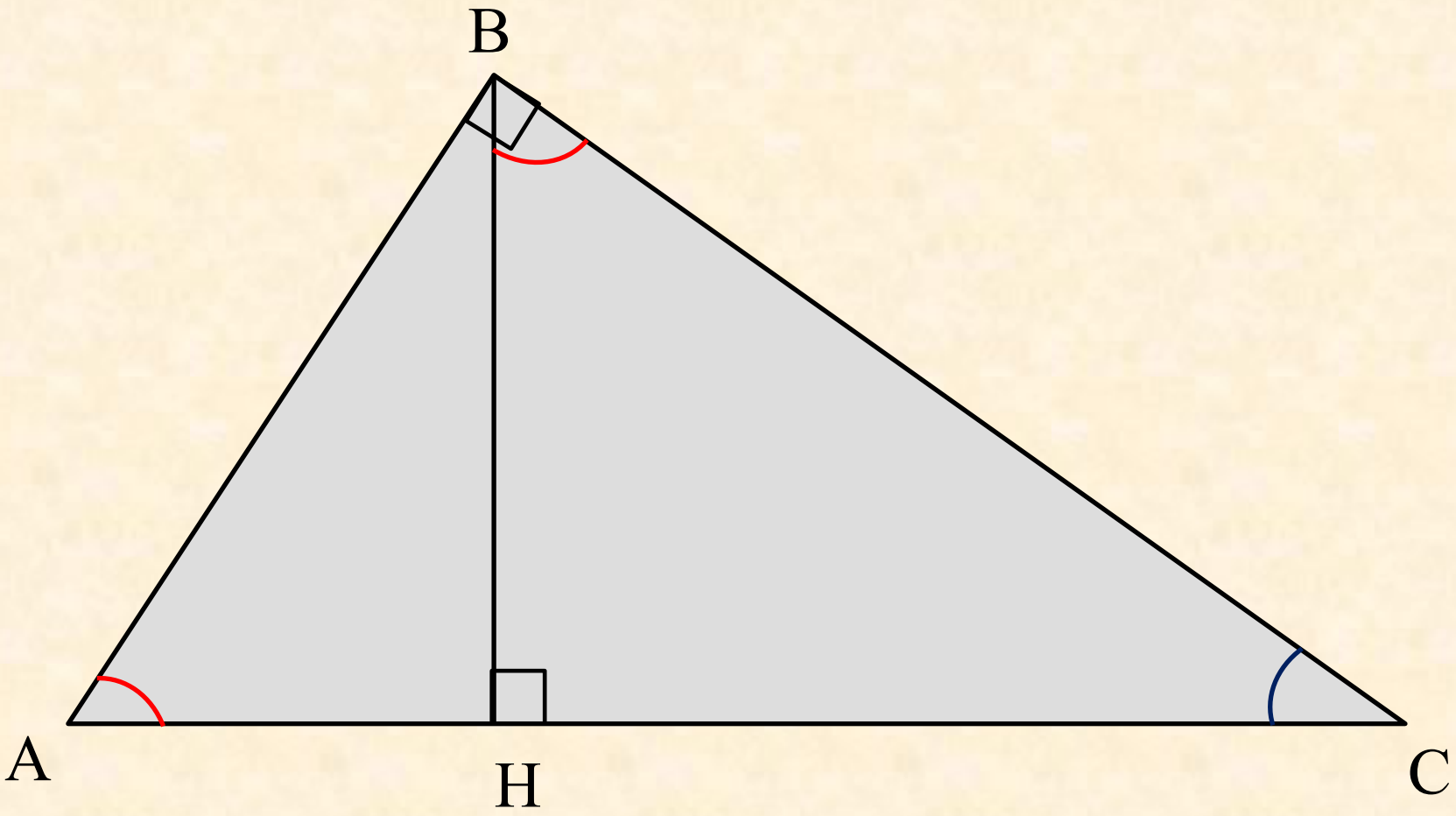


№ 3

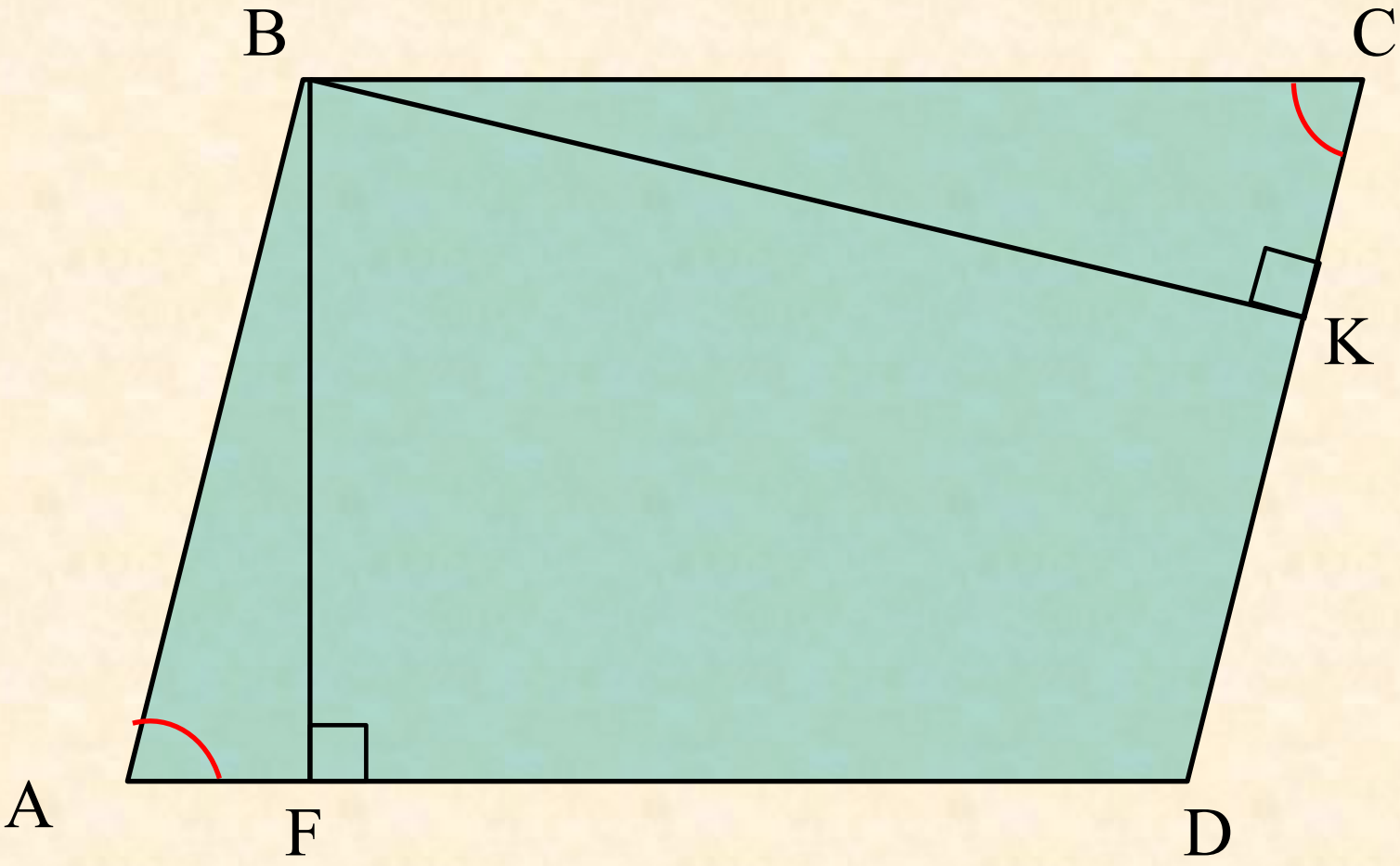


PEMD - трапеция

№ 4

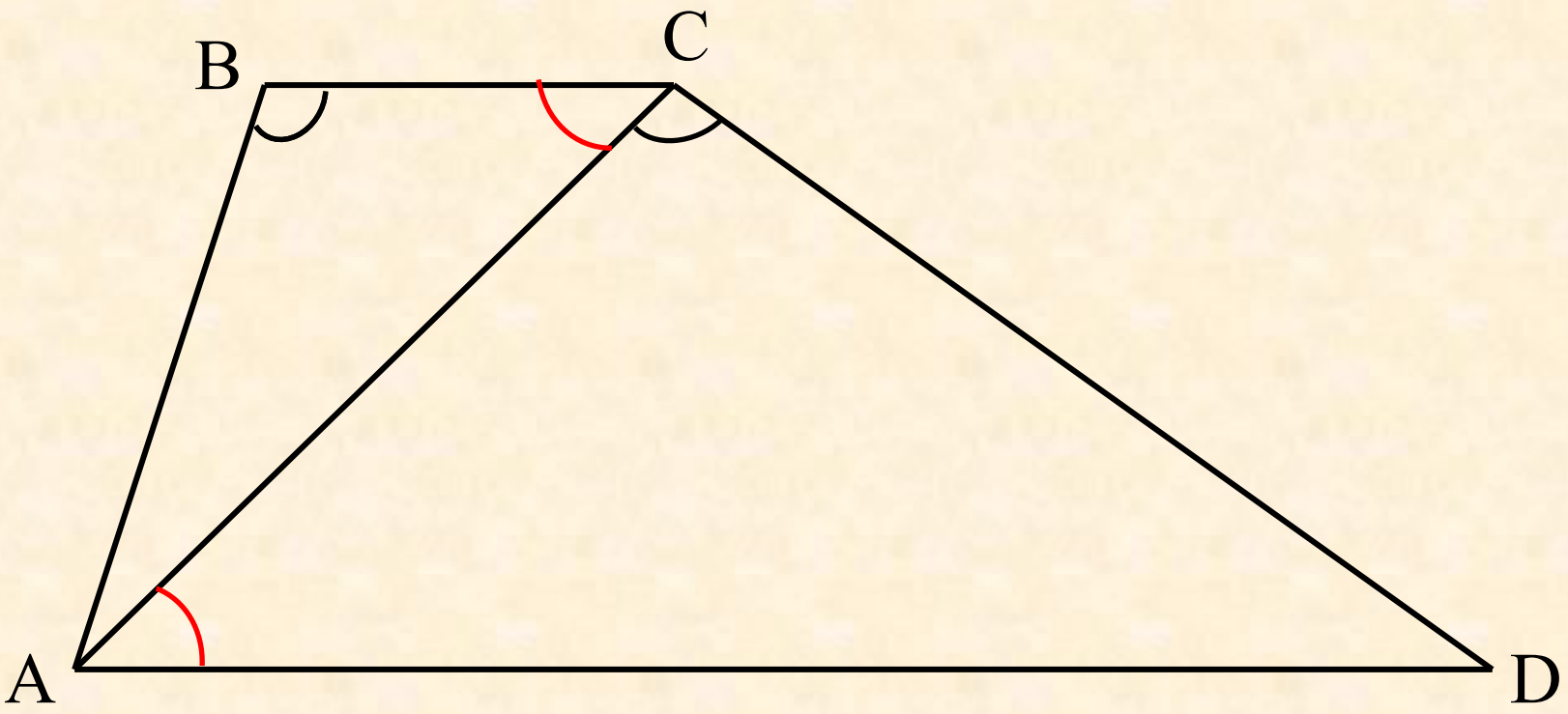


№ 5



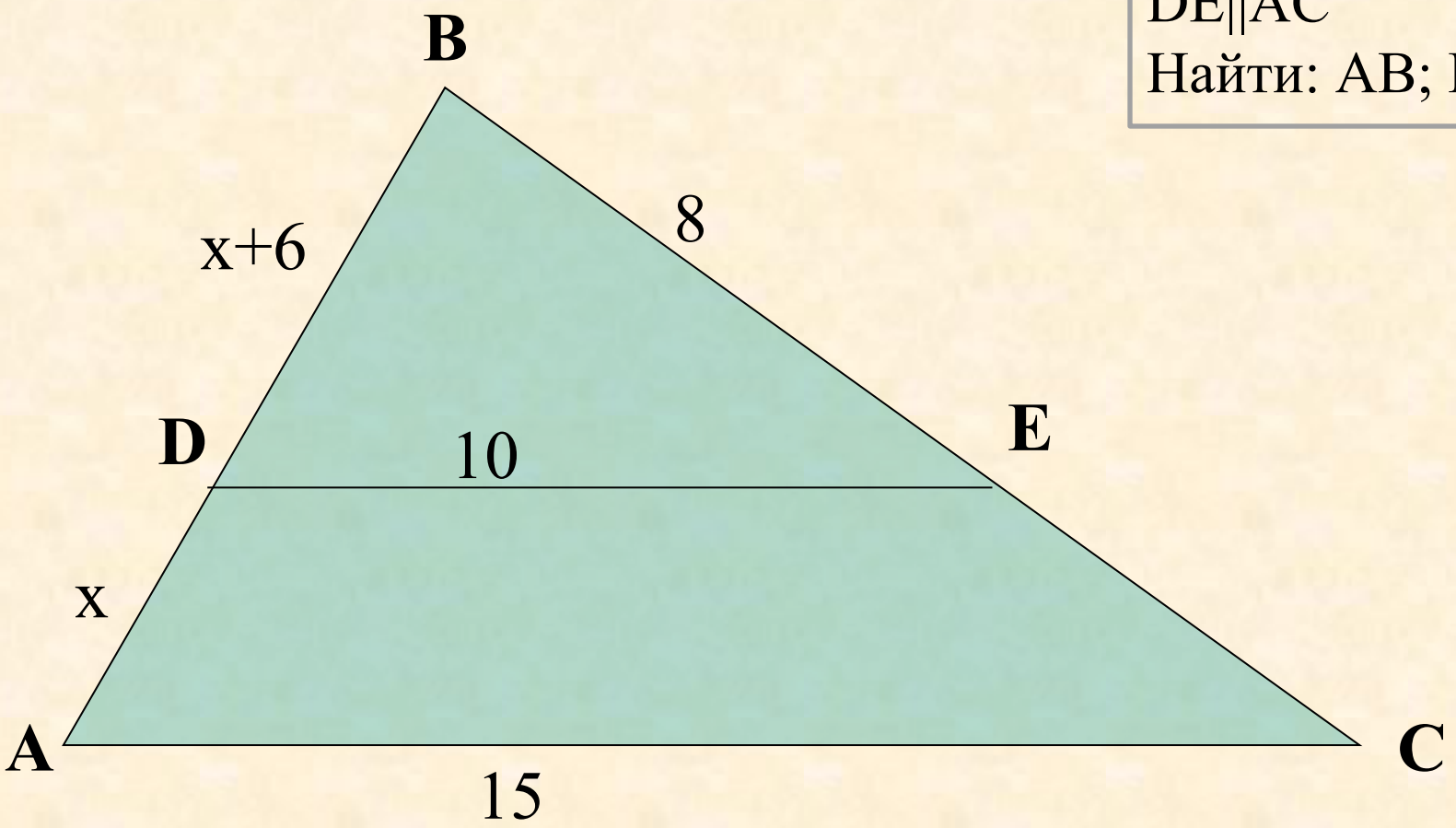
ABCD - параллелограмм

№ 6



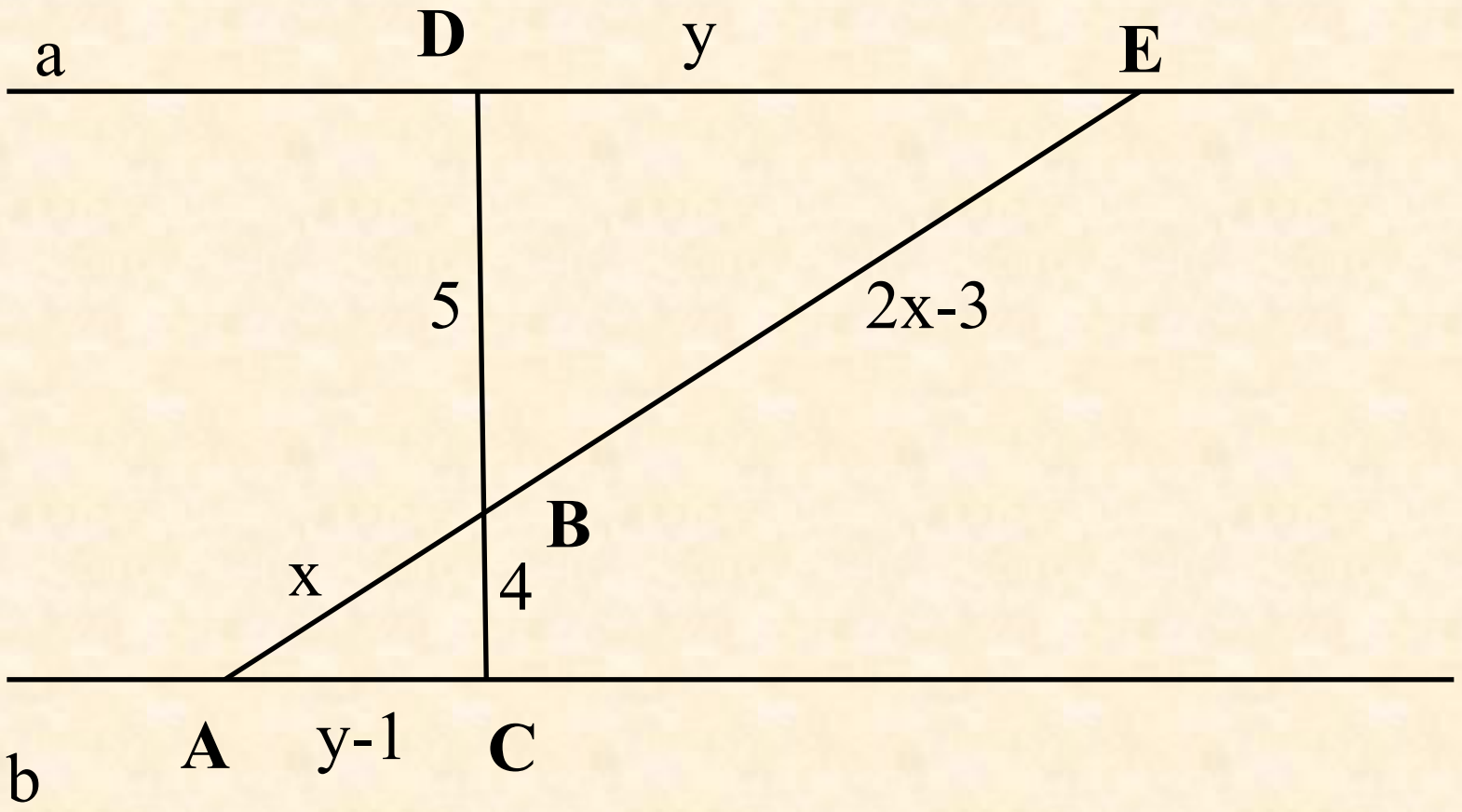
№ 7

DE||AC
Найти: AB; BC.



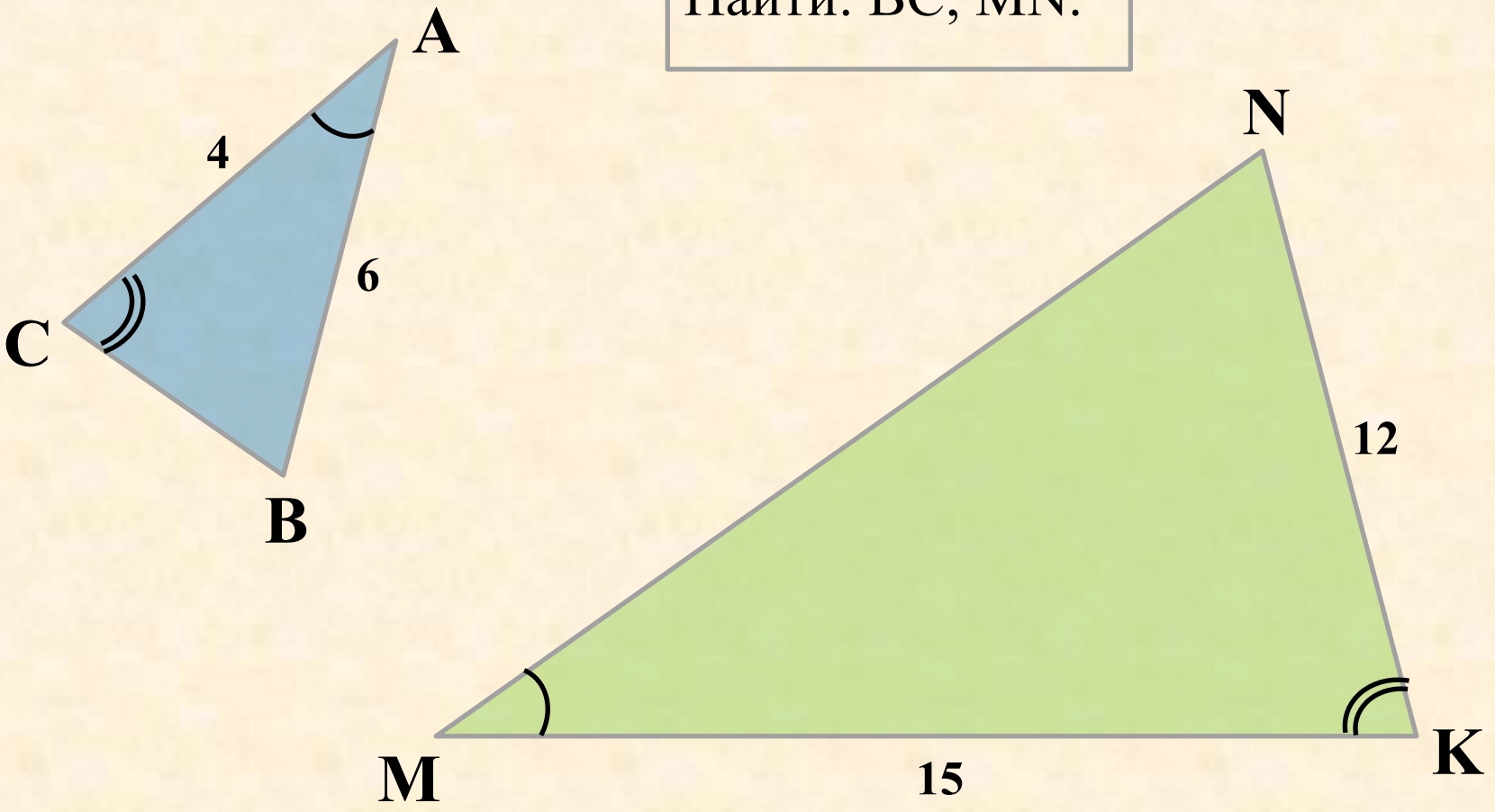
№ 8

a||b
Найти: x; y.



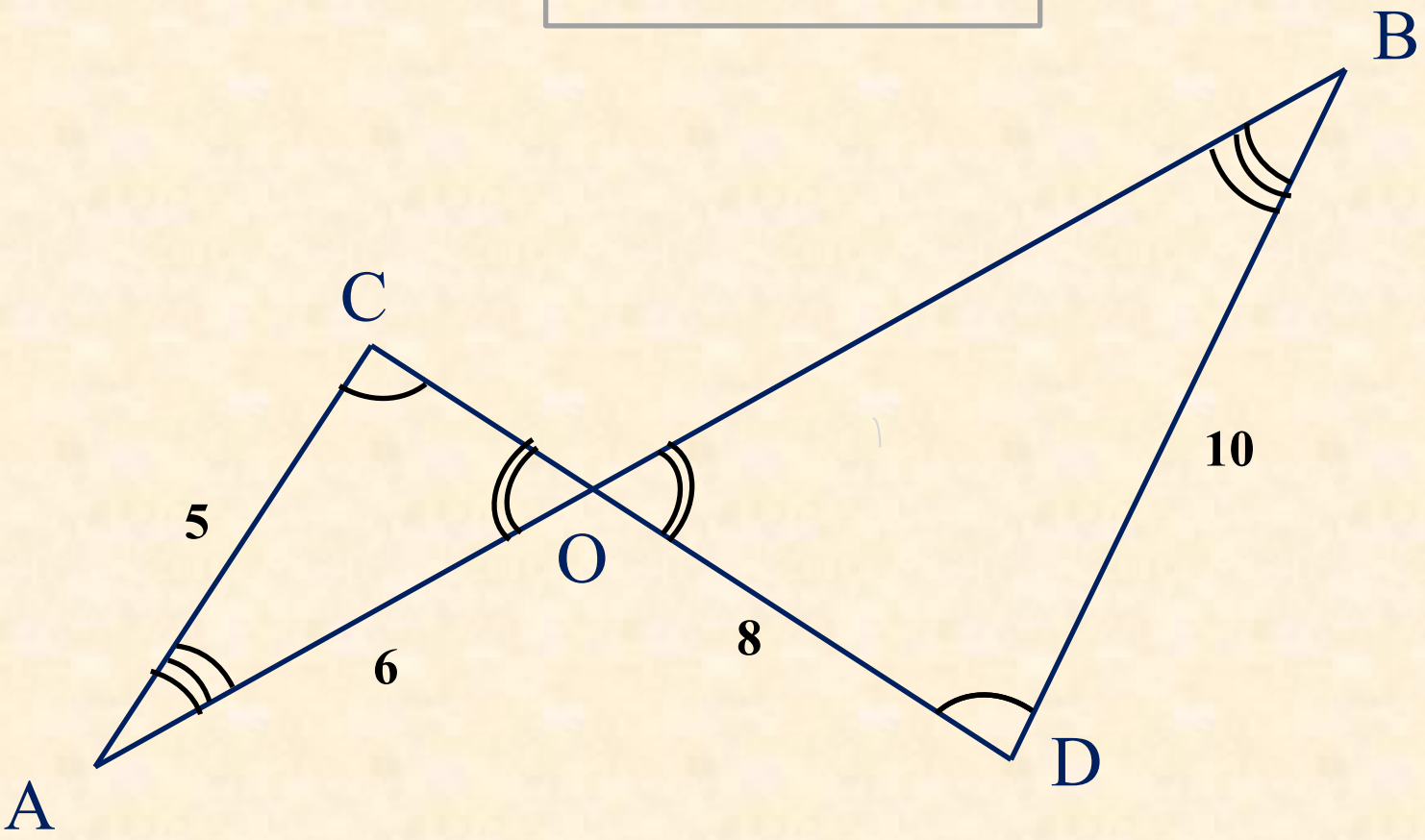
№ 9

Найти: BC; MN.



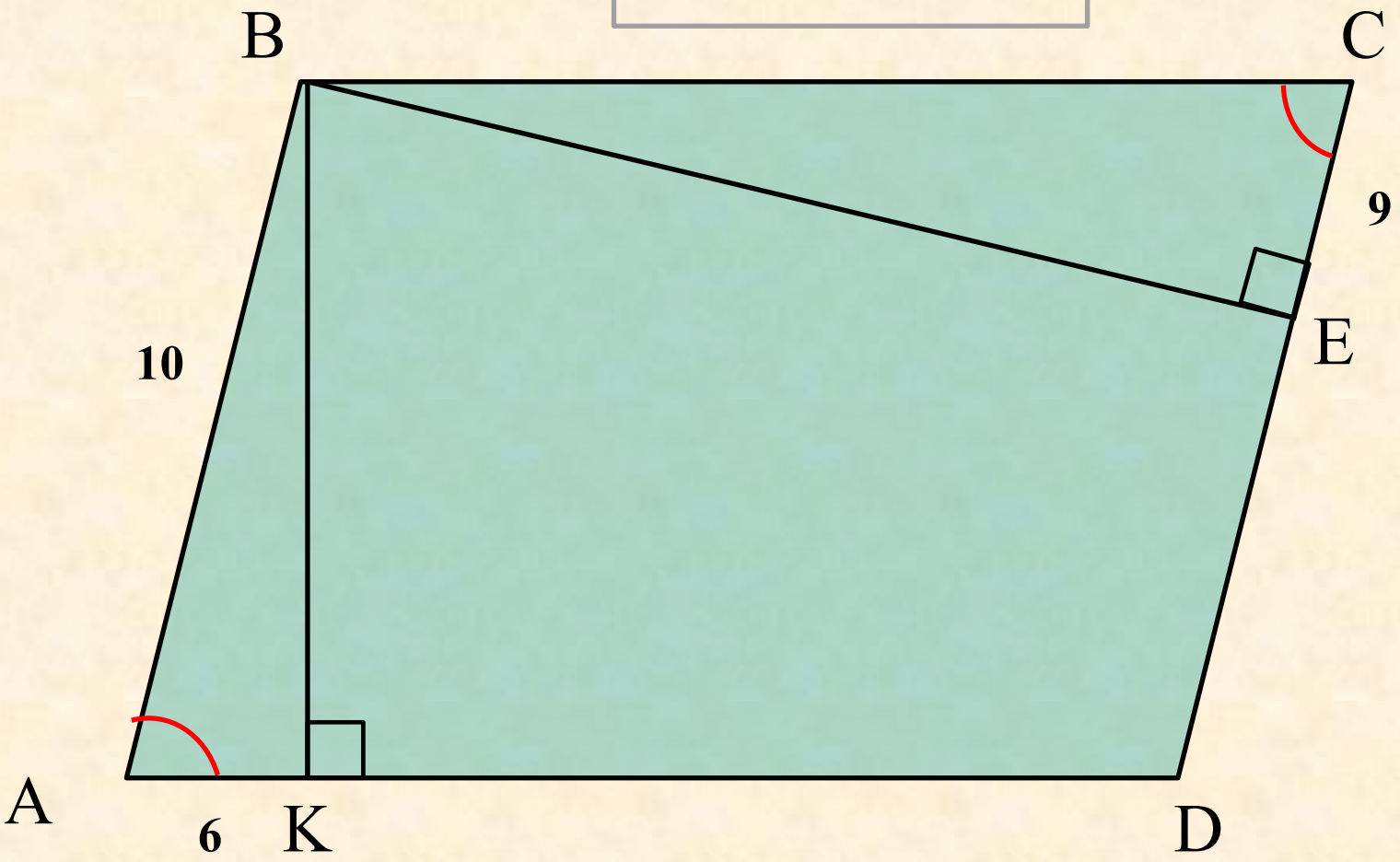
№ 10

Найти: BO; CO.



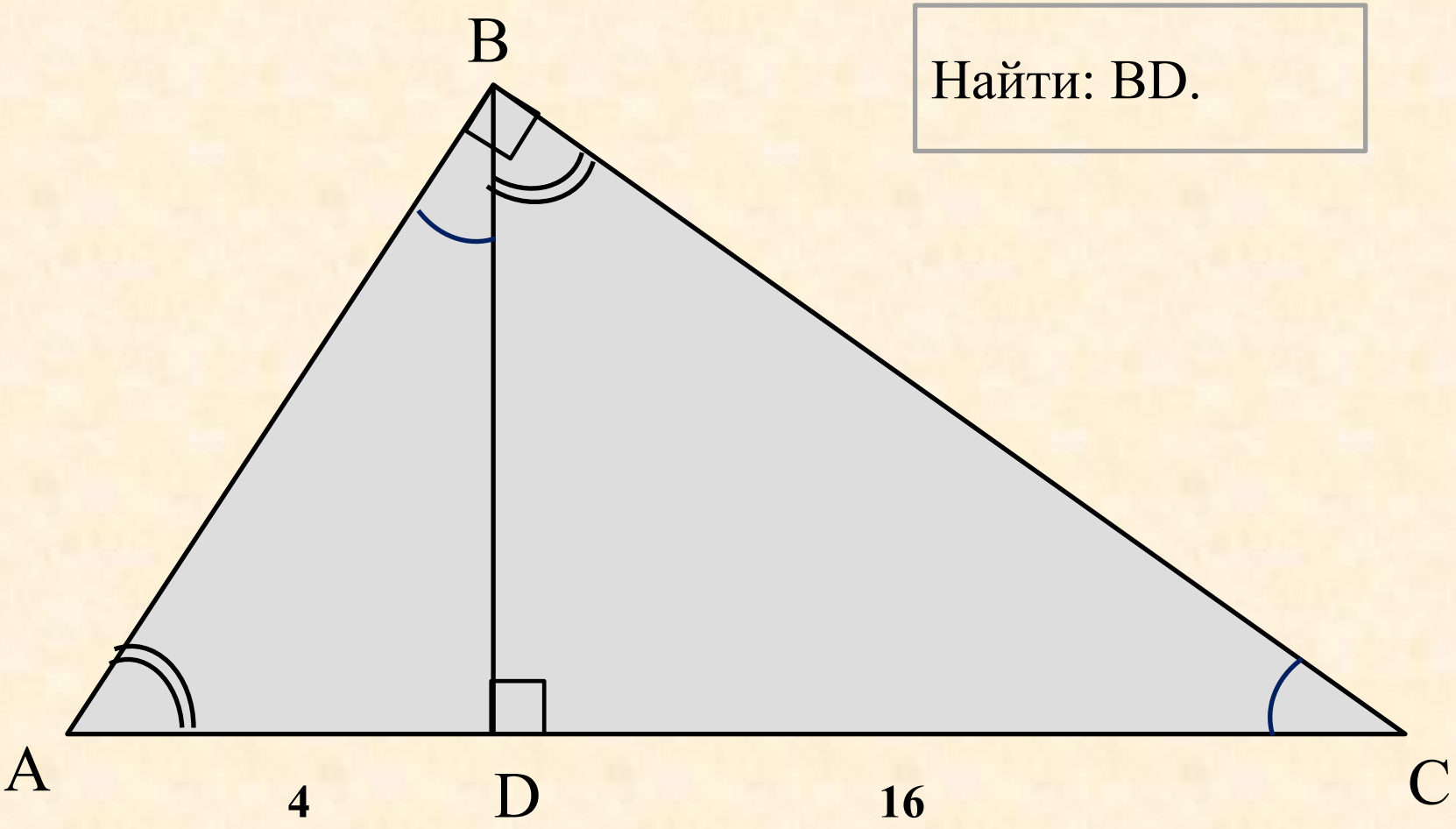
№ 11

Найти: BC.



ABCD - параллелограмм

№ 12



Найти: BD.