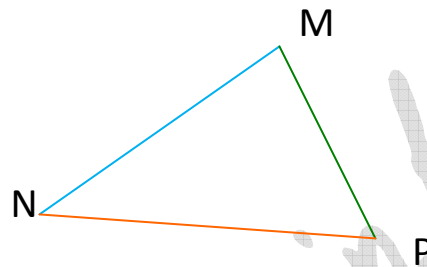
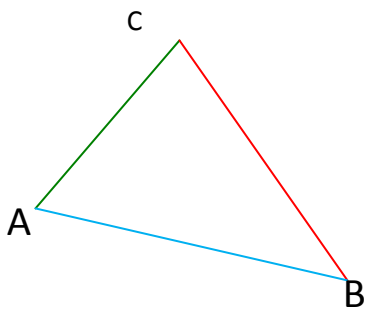




TRIUNGHIURI CONGRUENTE

Doua sau mai multe triunghiuri sunt **congruente**, daca fiecare latura a unuia din triunghiuri este congruenta cu o latura a celuilalt triunghi si fiecare unghi a unuia din triunghiuri este congruent cu un unghi al celuilalt triunghi.



$$AC \equiv MP$$

$$AB \equiv MN$$

$$BC \equiv NP$$

$$\angle A \equiv \angle M$$

$$\angle B \equiv \angle N$$

$$\angle C \equiv \angle P$$

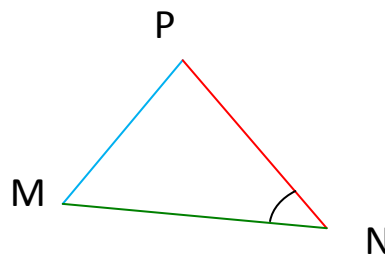
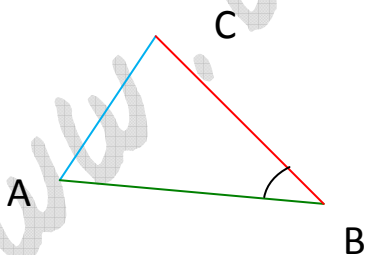
Vom nota ca triunghiul ABC este **congruent** cu triunghiul MNP astfel : $\Delta ABC \equiv \Delta MNP$

Perechile de laturi congruente le vom numi laturi corespunzatoare (la fel si unghiurile congruente, le vom numi unghiuri corespunzatoare)

Pentru a demonstra ca doua triunghiuri sunt congruente , nu este nevoie sa demonstram ca toate cele 6 elemente sunt congruente. Sunt suficiente doar 3 elemente congruente . Obtinem astfel asa numitele cazuri de congruenta , in numar de 3.

Cazul 1. Doua triunghiuri sunt congruente daca au 2 laturi congruente si unghiurile dintre ele congruente.

LUL



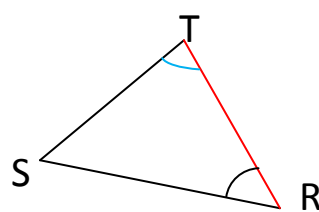
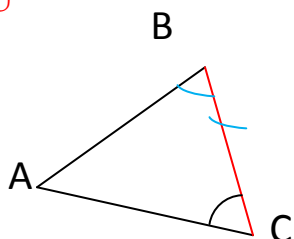
$$AB \equiv MN$$

$$BC \equiv PN$$

$$\angle ABC \equiv \angle MNP$$

$$\Delta ABC \equiv \Delta MNP$$

Cazul 2. Doua triunghiuri sunt congruente daca au doua unghiuri si latura lor comuna respectiv congruente. **ULU**

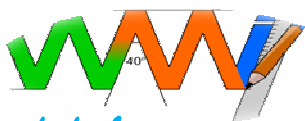


$$\angle ABC \equiv \angle STR$$

$$\angle ACB \equiv \angle SRT$$

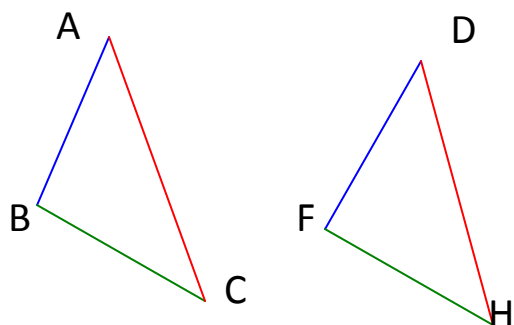
$$BC \equiv TR$$

$$\Delta ABC \equiv \Delta STR$$



cu noi totul pare mai usor

Cazul 3. Doua triunghiuri sunt congruente daca au toate laturile respectiv congruente. **LLL**



$$AB \equiv DF$$

$$BC \equiv FH$$

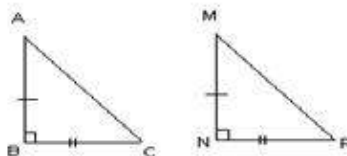
$$AC \equiv DH$$

$$\triangle ABC \equiv \triangle DFH$$

CONGRUENTA TRIUNGHIURILOR DREPTUNGHICE

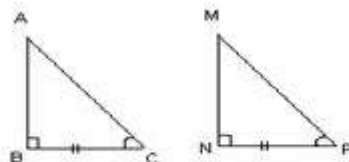
1. CAZUL C.C.

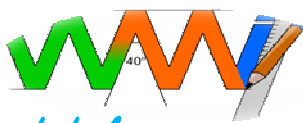
$$\left. \begin{array}{l} [AB] \equiv [MN] \\ [BC] \equiv [NP] \end{array} \right\} \Rightarrow \triangle ABC \equiv \triangle MNP$$



2. CAZUL C.U.

$$\left. \begin{array}{l} \sphericalangle C \equiv \sphericalangle P \\ [BC] \equiv [NP] \end{array} \right\} \Rightarrow \triangle ABC \equiv \triangle MNP$$



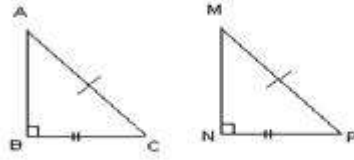


cu noi totul pare mai usor

3. CAZUL I.C.

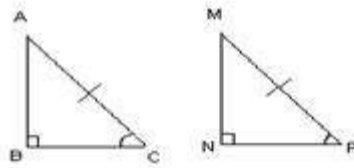
4.

$$\left. \begin{array}{l} [AC] = [MP] \\ [BC] = [NP] \end{array} \right\} \Rightarrow \triangle ABC \cong \triangle MNP$$



4. CAZUL I.U.

$$\left. \begin{array}{l} [AC] = [MP] \\ \sphericalangle C = \sphericalangle P \end{array} \right\} \Rightarrow \triangle ABC \cong \triangle MNP$$



METODA TRIUNghiURILOR CONGRUENTE.

Pentru a demonstra ca 2 triunghiuri sunt congruente , trebuie sa gasim elementele corespunzatoare congruente si sa ne incadram in unul din cele 3 cazuri.

Daca intr-o problema trebuie sa aratam ca doua unghiuri sau doua segmente sunt congruente , gasim doua triunghiuri congruente din care ele fac parte. Din congruenta triunghiurilor rezulta si congruenta segmentelor sau a unghiurilor ceruta de problema.