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$M_p : \triangle ABC$

$M \in (BC) \text{ a.T.}$

$BM = 2MC$

N, P - mijl $[AB], [CN]$

Cl: a) A, P, M - coliniare

b) $\triangle ABC, DE \parallel AB$

$E \in (AC) \text{ a.T. } \frac{AD}{AB} = \frac{1}{4}$

si $\frac{AE}{AC} = \frac{3}{4}$

mijl. $[AB], [DE], [AC]$ - coliniare

c) $\triangle ABC, DE \parallel AB, E \in (AC) \text{ a.T.}$

$DE \parallel BE; M$ - mijl $[BC]$

$DE \cap BE = \{N\} \Rightarrow A, N, M$ - coliniare

clau: a) T. rec. a lui Menelaus = Daca $A' \in BC, B' \in AC, C' \in AB$ si daca A', B', C' sunt. mt. pe lat.

si unul pe prelung. lat. sau toate 3 pe prelung. lat. si daca $\frac{A'B}{A'C} \cdot \frac{B'C}{B'A} \cdot \frac{C'A}{C'B} = 1$

\Rightarrow Pct. A', B', C' - coliniare

$\Rightarrow \frac{AN}{AB} \cdot \frac{MB}{MC} \cdot \frac{PC}{PN} = \frac{AN}{AB} \cdot \frac{2}{1} \cdot 1$

$\Rightarrow \frac{AN}{AB} = \frac{1}{2}$

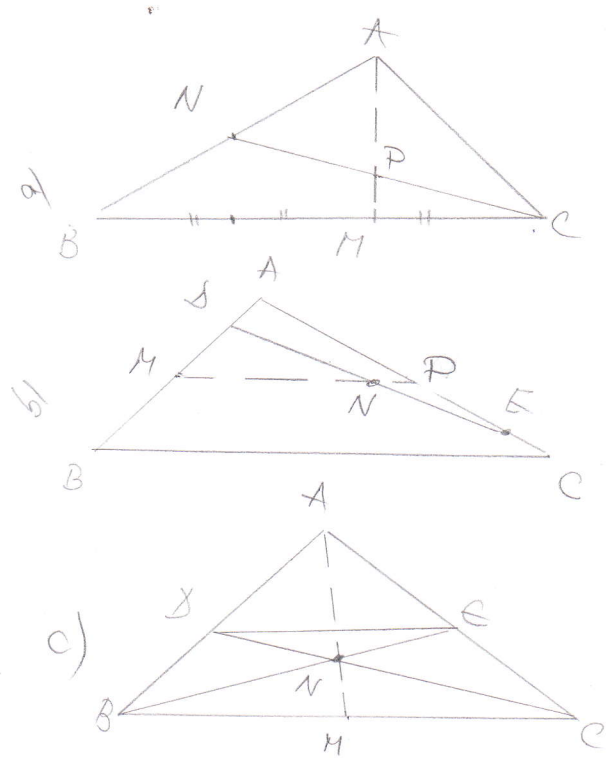
$\Rightarrow \frac{1}{2} \cdot \frac{2}{1} \cdot 1 = 1 \Rightarrow A, M, P$ - coliniare R.T.M.

b) $\triangle ADE: \frac{MD}{MA} \cdot \frac{PA}{PE} \cdot \frac{NE}{ND} \Rightarrow \frac{MD}{MA} \cdot 2 \cdot 1 = 1$

$\Rightarrow \frac{MD}{MA} = \frac{1}{2}$

$\Rightarrow \frac{MD}{MA} \cdot \frac{PA}{PE} \cdot \frac{NE}{ND} = 1$

$\Rightarrow M, N, P$ - coliniare R.T.M.



c) $\triangle BDC: \frac{AD}{AB} \cdot \frac{MB}{MC} \cdot \frac{NC}{ND} \Rightarrow$
 $\Rightarrow \frac{AD}{AB} \cdot 1 \cdot \frac{NC}{ND}$

$\Rightarrow \frac{AD}{AB} \cdot \frac{NC}{ND} = \frac{AD}{AB} \cdot \frac{BC}{DE} = 1$

R.T.M.
 $\Rightarrow A, N, M$ coliniare