



$$\left. \begin{array}{l} \triangle SAM \text{ și } \triangle SAN \\ \hat{S} - \text{unghi comun} \\ SN \text{ sec. pt. } AB, DC \Rightarrow \widehat{SMA} = \widehat{SND} \\ (AB \parallel DC) \end{array} \right\} \Rightarrow$$

$$\stackrel{u.u.}{\Rightarrow} \triangle SAM \sim \triangle SAN \quad (1)$$

$$\left. \begin{array}{l} \triangle SAM \text{ și } \triangle SPO \\ \hat{S} - \text{comun} \\ SN \text{ sec. pt. } DC, AO \\ (DC \parallel PO) \end{array} \right\} \stackrel{u.u.}{\Rightarrow} \triangle SAM \sim \triangle SPO \quad (2)$$

$$\left. \begin{array}{l} \vec{SM} = \vec{SA} + \vec{AM} \\ \vec{SN} = \vec{SD} + \vec{DN} \end{array} \right\} \stackrel{(1)}{\Rightarrow} \vec{SM} = \vec{SA} + \vec{AM}$$

$$\vec{SN} = k \cdot \vec{SA} + k \cdot \vec{AM} = k(\vec{SA} + \vec{AM}) = k \cdot \vec{SM} \Rightarrow$$

$$\Rightarrow S, N, M - \text{coliniare} \quad (3)$$

$$\left. \begin{array}{l} \vec{SO} = \vec{SP} + \vec{PO} \\ \vec{SN} = \vec{SD} + \vec{DN} \end{array} \right\} \stackrel{(2)}{\Rightarrow} \vec{SO} = \vec{SP} + \vec{PO}$$

$$\vec{SN} = k \cdot \vec{SP} + k \cdot \vec{PO} = k(\vec{SP} + \vec{PO}) = k \cdot \vec{SO} \Rightarrow$$

$$\Rightarrow S, N, O - \text{coliniare} \quad (4)$$

$$(3), (4) \Rightarrow S, N, O, M - \text{coliniare}$$