

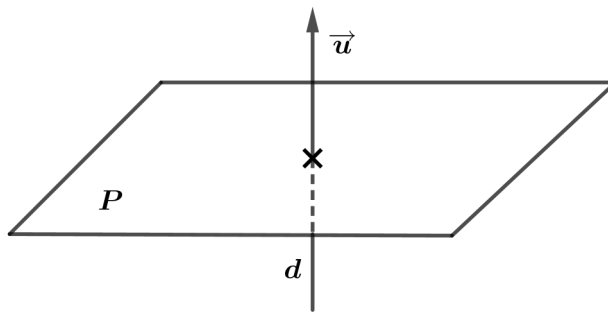
PERPENDICULAR LINE ON THE REAL PLAN

DANIEL SITARU - ROMANIA

Let be $A(1, 1, 1)$ and the real plan:

$$P : x + 2y + 3z - 4 = 0$$

Find the equations of the perpendicular line from A to the real plan P .



$$\begin{aligned} \vec{u}(1, 2, 3) \\ \vec{u} &= \vec{i} + 2\vec{j} + 3\vec{k} \\ d : \frac{x - x_A}{1} &= \frac{y - y_A}{2} = \frac{z - z_A}{3} \\ d : x - 1 &= \frac{y - 1}{2} = \frac{z - 1}{3} \end{aligned}$$

Let's find also the parametrical equations of d :

$$x - 1 = t; \frac{y - 1}{2} = t; \frac{z - 1}{3} = t$$

$$d : \begin{cases} x = 1 + t \\ y = 1 + 2t \\ z = 1 + 3t \end{cases} ; t \in \mathbb{R}$$

MATHEMATICS DEPARTMENT, NATIONAL ECONOMIC COLLEGE "THEODOR COSTESCU", DROBETA
TURNU - SEVERIN, ROMANIA

Email address: dansitaru63@yahoo.com