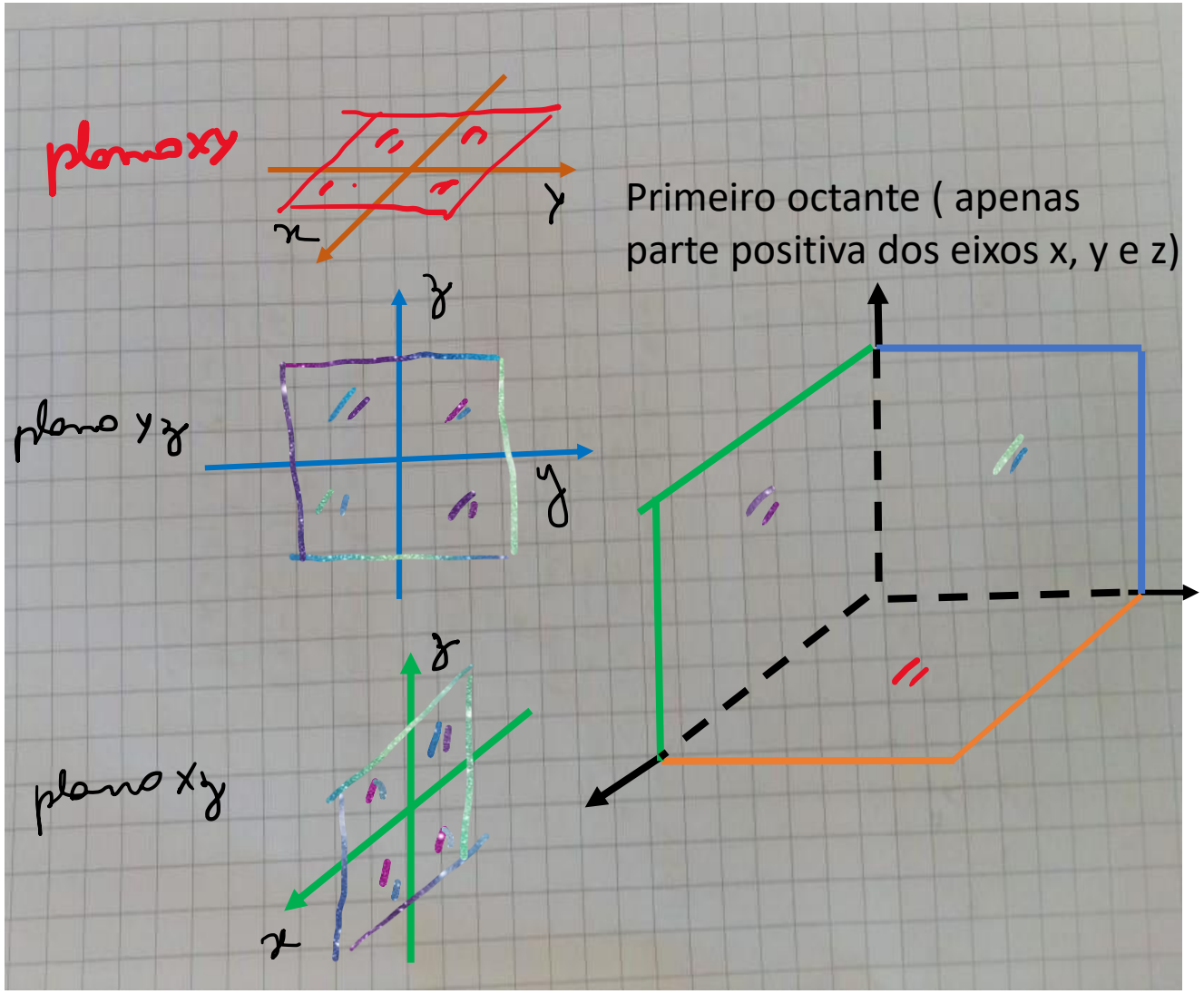
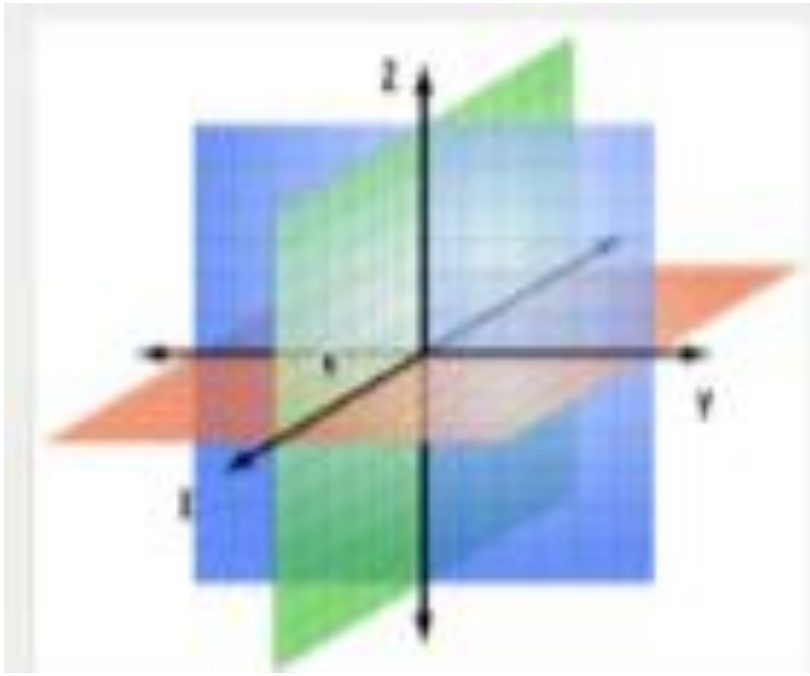
O Espaço R3

Profa. Dra Simone Leal Schwertl

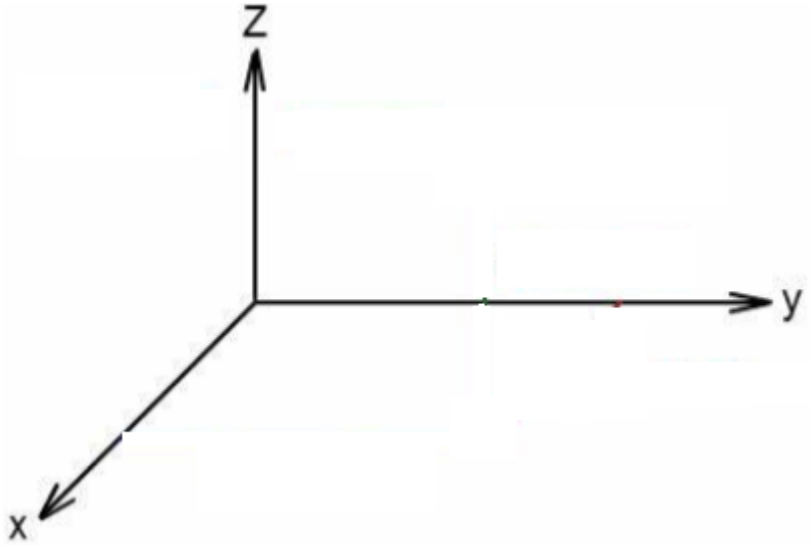
FURB

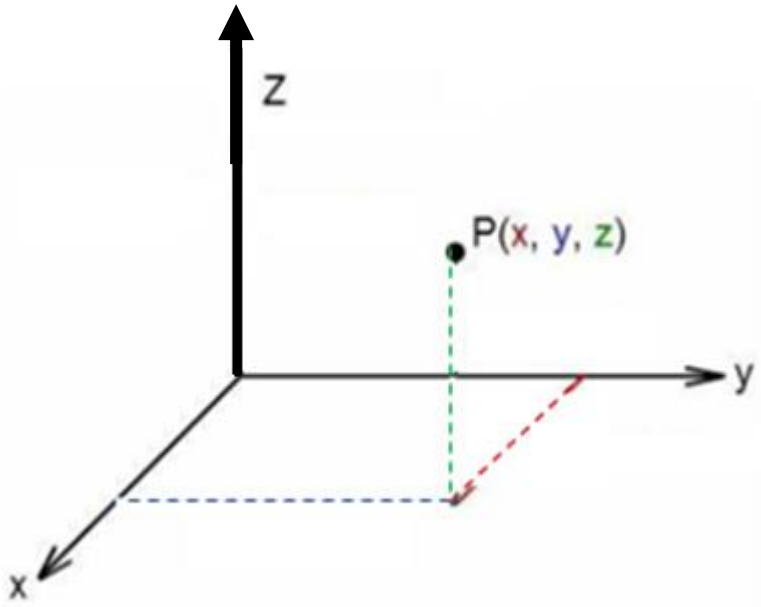
O Espaço R3
É formado pela interseção de 3 planos: xy, xz e yz.

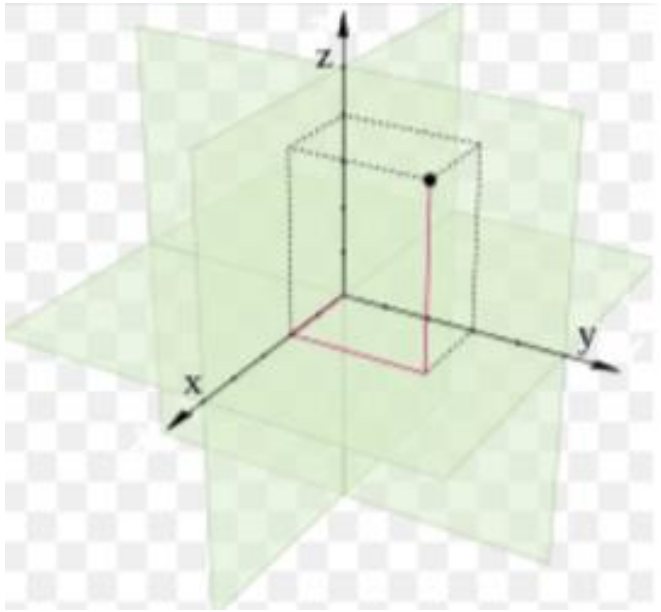


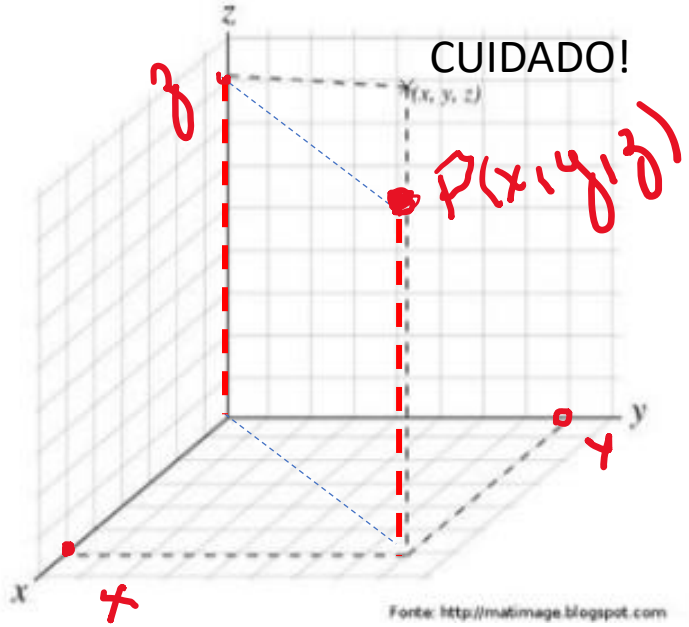


Representação simplificada do espaço R3:



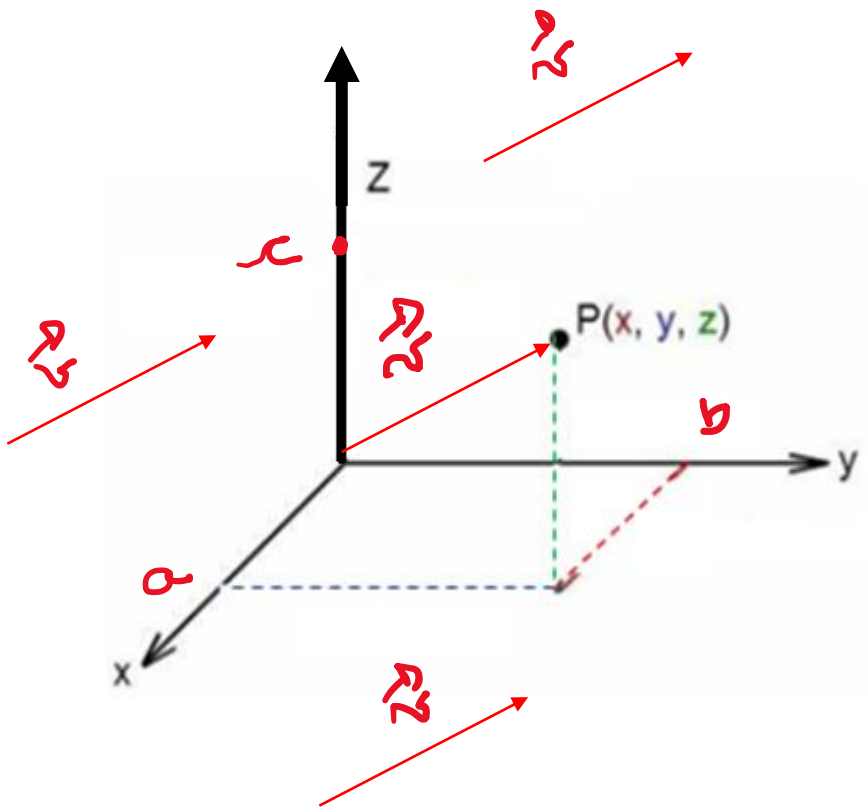




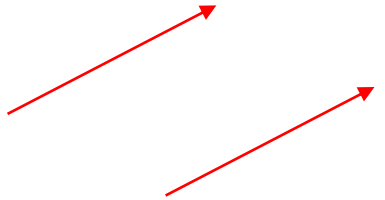


Localização de um ponto P de coordenadas (x,y,z)

Representação de um vetor



Um vetor tem infinitos representantes, que possuem a mesma direção, o mesmo sentido e o mesmo comprimento.



$\vec{v} = (a, b, c)$

ou

$\vec{v} = a\vec{i} + b\vec{j} + c\vec{k}$

Exercício:
Representar em R3 os seguintes entes geométricos :

a) A(2,3,0)
b) B(0, 3, 5)
c) C(2,0,5)
d) D(2,3,5)
e) $\vec{n}$=(2,0,5)
f) $\vec{u}$=(2,3,0)
g) $\vec{w}$=(0,3,5)
h) $\vec{v}$=(2,3,5)
i) $\vec{n}_1$=(1,0,0)
j) $\vec{n}_2$=(0,1,0)
k) $\vec{n}_3$=(0,0,3)