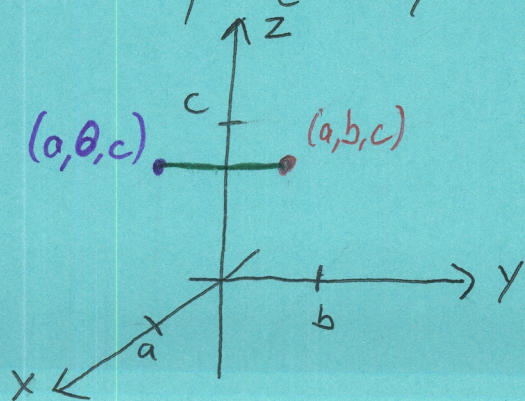


Given a point  $(a, b, c)$  in  $\mathbb{R}^3$ , we can talk about the projection of that point onto the coordinate planes. We do this by setting the respective coordinate to zero, i.e.,

projection of $(a, b, c)$ onto	is
xy-plane ( $z = 0$ )	$(a, b, 0)$
xz-plane ( $y = 0$ )	$(a, 0, c)$
yz-plane ( $x = 0$ )	$(0, b, c)$

Geometrically, this is accomplished by connecting the point to the plane by a perpendicular line:



This is the projection of  $(a, b, c)$  onto the xz-plane ( $y=0$ ) resulting in  $(a, 0, c)$ . The green line is the perpendicular.