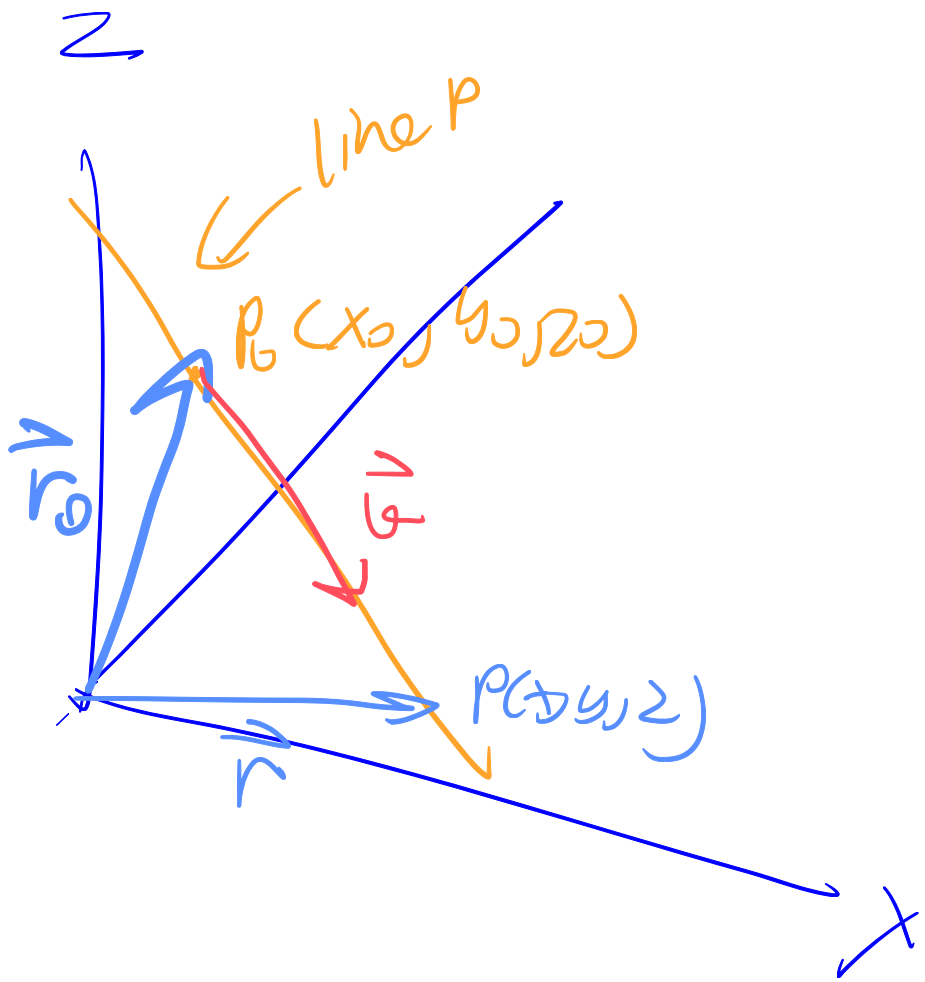

$\vec{v}$ is parallel to line P

$$\vec{r} = \vec{r_0} + t\vec{v}$$

Find the vector equation for the line that passes through point (2,4,-3) and parallel to the vector 3i-2j+5k

$$\vec{r} = \vec{r_0} + t\vec{a}$$

$$= \vec{r_0} + t(3i - 2j + 5k)$$

$$= 2i + 4j - 3k + t3i - 2jt - 5kt$$

$$= 2i - 3it + 4j - 2jt - 3k - 5kt$$

$$r = (2 - 3t)i + (4 - 2t)j + (-3 - 5t)k$$