#4) Find the point of intersection of the line   (4pts)

Point $\dfrac{x \ominus 2}{3} = \dfrac{y \ominus 3}{2} = \dfrac{z \ominus 1}{1}$ and the plane $x + 4y - z - 7 = 0$

dir.

$x = -2 + 3t$

$y = 3 + 2t$

$z = 1 + t$

$-2 + 3t + 4(3 + 2t) - (1 + t) - 7 = 0$

$-2 + 3t + 12 + 8t - 1 - t - 7 = 0$

$-2, 12, -1, 7 \mid 3t, 8t, -t$

$2 \quad + \quad \mid \quad 10t = 0$

$10t = -2$

$t = -2/10 \sim \boxed{-1/5}$

$x = -2 + 3(-1/5)$

$y = 3 + 2(-1/5)$

$z = 1 + (-1/5) =$

$\boxed{\langle -13, 13, 4 \rangle}$

$-2\,{}^{3}\!/5 \cdot (2.6)$

$2\,{}^{3}\!/5 \; (2.6) \qquad \times 5$

$4/5 \; (.8)$

#5) Write the parametric equation for the line which
passes through the points $A(2,1,0)$ and $B(-3,4,1)$.   (4pts)

$\overrightarrow{AB} = \langle -5, 3, 1 \rangle$

B. $(-3,4,1)$

A$(2,1,0)$

equations

$\boxed{\begin{array}{l} x = 2 - 5t \\ y = 1 + 3t \\ z = t \end{array}}$

$-3 - 5t$

$4 + 3t$

$1 + t$

$2 - 5(2) = -8$

$1 + 3(2) = 7$

2

$-3 - 5(2) \quad -13$

$4 + 3(2) \quad = 10$

$1 + 2 \quad = \quad 3$