(1, 2, 0) → ⟨−1, −1, 6⟩ = a

(0, 1, 6)

(1, −2, 5) → ⟨1, −3, −1⟩ = b

$a \times b = \langle 19, 5, 4 \rangle$

(x, y, z)

$v = \langle x-1, y+2, z-5 \rangle$

$(a \times b) \cdot v$

$= 19(x-1) + 5(y+2) + 4(z-5) = 0$

$19x + 5y + 4z - 29 = 0$

Find an eq. of a plane w/

x-int of 3 (3, 0, 0) → a

y-int of 10 (0, 10, 0) → b

z-int of −2 (0, 0, −2) → b

$a = \langle 3, -10, 0 \rangle$

$b = \langle 0, -10, -2 \rangle$

$a \times b = \langle 20, 6, 30 \rangle$

$v = \langle x-3, y, z \rangle$

$(a \times b) \cdot v = 20(x-3) + 6y - 30z$

$= 30x + 6y - 30z - 90$

$= 0$

Let plane ℓ be $2x-3y+5z=20$,

1) Find a vector $\perp$ ℓ.

$\langle 2, -3, 5 \rangle$

2) Find a point on the plane.

$(0, 0, 4)$

3) Find x, y, & z int.

x-int: 10

y " : $-\frac{20}{3}$

z " : 4

$3x+5y-6z=15$ $\qquad \frac{x-1}{3} = \frac{y+2}{-1} = \frac{z}{2}$

Describe the relationship, if intersect, find the pt.

$\left(1+\frac{66}{-8}, -2+\frac{22}{8}, \frac{-44}{8}\right)$

$= \left(\frac{-29}{4}, \frac{3}{4}, \frac{-11}{2}\right)$