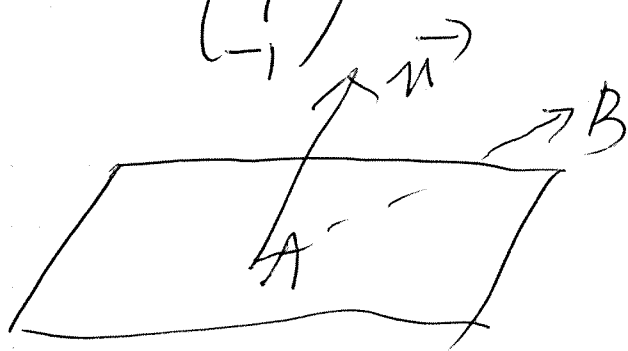


ex. Find the distance from  
 $B = (1, 0, 2)$  to the plane

$$x + y - z = 1.$$

sol.  $n = \begin{pmatrix} 1 \\ 1 \\ -1 \end{pmatrix}$



$$A = (1, 0, 0), B = (1, 0, 2)$$

$$V = B - A = (0, 0, 2)$$

$$\text{length} = |\text{proj}_n V| = \left| \frac{(n \cdot V)}{(n \cdot n)} n \right|$$

$$= \left| \frac{-2}{3} \begin{pmatrix} 1 \\ 1 \\ -1 \end{pmatrix} \right| = \frac{2}{3} \sqrt{3}$$