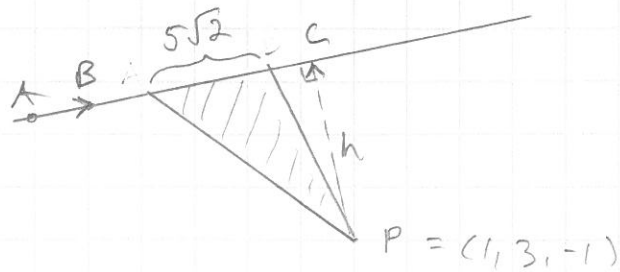


10.6

$$\begin{cases} x = 2 - t \\ y = 3 - t \\ z = 1 - t \end{cases} \quad t \in \mathbb{R}$$



$t=0: A = (2, 3, 1)$

$t=1: B = (1, 2, 0)$

$$\vec{PC} = \vec{PA} + \vec{AC} = \vec{PA} + t\vec{AB}$$

$$= (1\vec{i} + 2\vec{j}) + t(-1\vec{i} - \vec{j} - \vec{k})$$

$$= (1-t)\vec{i} - t\vec{j} + (2-t)\vec{k}$$

$$\vec{AB} \perp \vec{PC} \Leftrightarrow \vec{AB} \cdot \vec{PC} = -1 \cdot (1-t) + (-1) \cdot (-t) + (-1) \cdot (2-t) = 0$$

$$\Leftrightarrow 3t - 3 = 0 \quad \Leftrightarrow t = 1$$

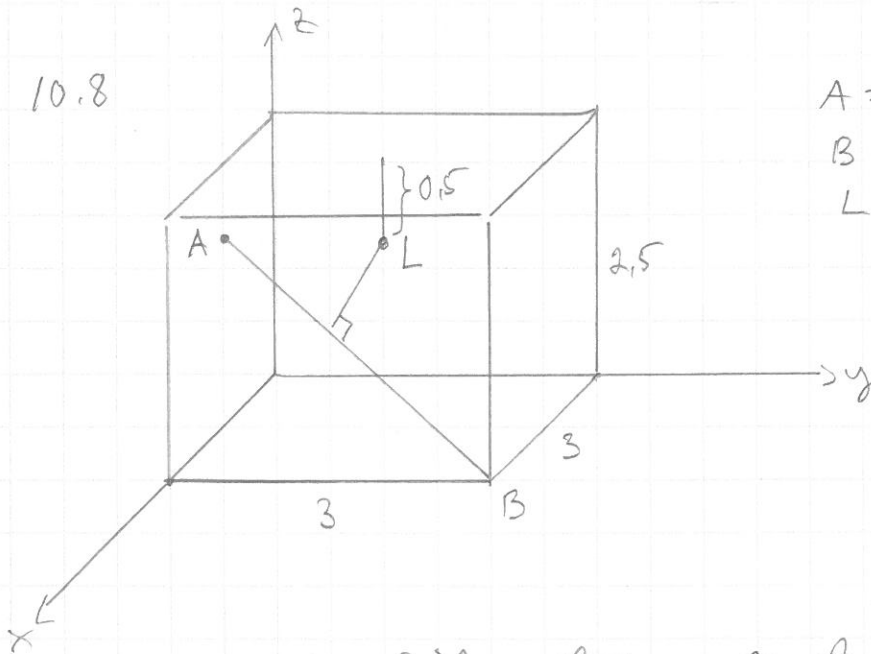
mj.

$$\Rightarrow \vec{PC} = -\vec{j} + \vec{k}$$

kolmuksen korkeus:  $h = |\vec{PC}| = \sqrt{0^2 + (-1)^2 + 1^2} = \sqrt{2}$

—||— pinta-ala:  $A_k = \frac{1}{2} \cdot 5\sqrt{2} \cdot \sqrt{2} = \underline{5}$

10.8



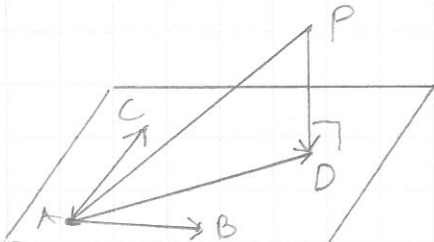
$A = (1,5; 0; 2)$

$B = (3, 3, 0)$

$L = (1,5; 1,5, 2)$

11. Pisteen etäisyys tasosta

tason muntavektorit



$$\vec{PD} = \vec{PA} + \vec{AD} = \vec{PA} + s\vec{AB} + t\vec{AC}$$

$$\begin{cases} \vec{PD} \perp \vec{AB} & \Leftrightarrow \vec{AB} \cdot \vec{PD} = 0 \\ \vec{PD} \perp \vec{AC} & \Leftrightarrow \vec{AC} \cdot \vec{PD} = 0 \end{cases}$$

$\Leftrightarrow s = \dots, t = \dots$

$$\Rightarrow \vec{PD} = \dots \Rightarrow \begin{cases} |\vec{PD}| = \dots \\ D = (\dots, \dots, \dots) \end{cases}$$