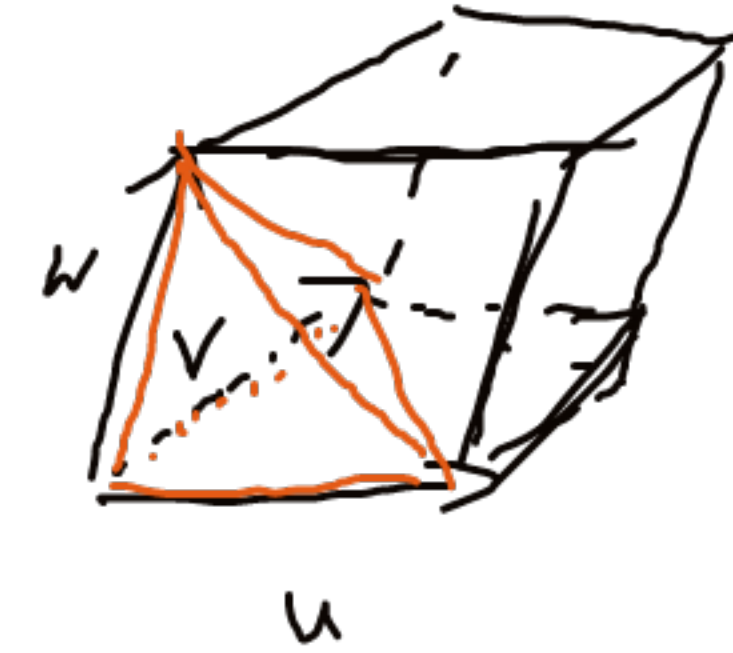
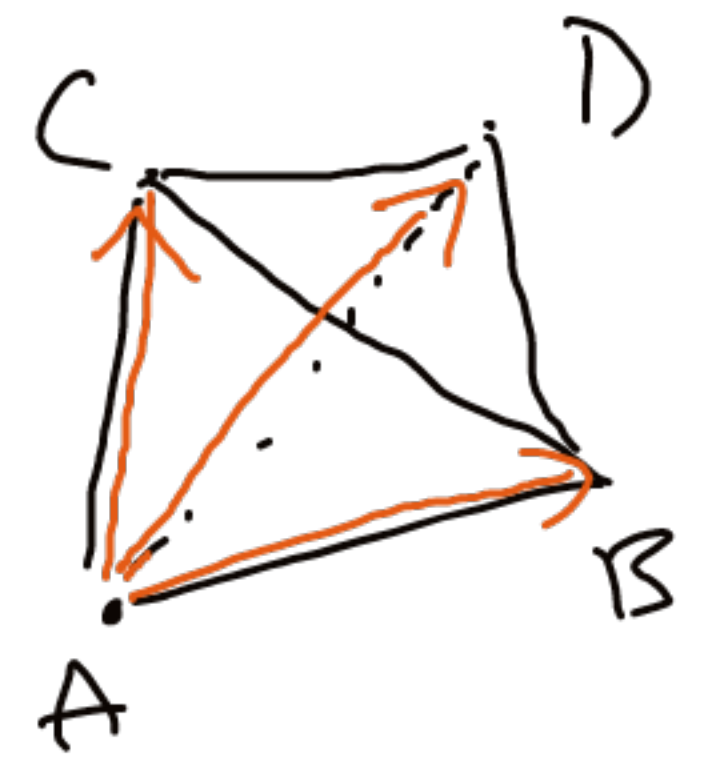


X1 $A = (1, p, 1)$ $B = (1, 1, 2)$ $C = (2, 1, 1)$ $D = (p, p, p)$

$\vec{AB} = (0, 1, 1)$

$\vec{AC} = (1, 1, 0)$

$\vec{AD} = (p-1, p, p-1)$



$$V_{ABCD} = \frac{1}{6} \left| \det \begin{bmatrix} 0 & 1 & 1 \\ 1 & 1 & 0 \\ p-1 & p & p-1 \\ 0 & 1 & 1 \\ 1 & 1 & 0 \end{bmatrix} \right| =$$

$$P_{\triangle} = |(\vec{u} \times \vec{v}) \cdot \vec{w}| =$$

$$= \left| \det \begin{bmatrix} u_x & u_y & u_z \\ v_x & v_y & v_z \\ w_x & w_y & w_z \end{bmatrix} \right|$$

$$= \frac{1}{6} \left| 0 + p + 0 - (p-1 + 0 + p-1) \right| =$$

$$P_{\triangle} = \frac{1}{6} |(\vec{u} \times \vec{v}) \cdot \vec{w}|$$

$$= \frac{1}{6} |-p + 2| = 1$$

$$|-p + 2| = 6$$

def. $p = -4$ \vee $p = 8$

$$-p + 2 = 6 \quad \vee \quad -p + 2 = -6$$

$$p = -4 \quad \vee \quad p = 8$$