



P je projekce do $Z(Q)^\perp$

Pr: $A = [2, 1, 2]$ $Q: [1, 1, 1] + t(1, 1, 0) + s(0, 1, 1)$
 B

$$\begin{pmatrix} 1 & 1 & 0 \\ 0 & 1 & 1 \end{pmatrix} \begin{pmatrix} 1 \\ -1 \\ 1 \end{pmatrix} = \begin{pmatrix} 0 \\ 0 \end{pmatrix} \quad n = (1, -1, 1)$$

$v = \vec{AB} = B - A = (-1, 0, -1) \rightsquigarrow P_n \parallel n$

$v - P_n \perp n \quad P_n = a \cdot n$

$\langle v - P_n, n \rangle = \langle v - a \cdot n, n \rangle = 0$
 $-2 - a \cdot 3 = 0 \quad a = -\frac{2}{3}$

$\|-\frac{2}{3}n\| = |-\frac{2}{3}| \cdot \|n\| = \frac{2}{3} \cdot \sqrt{1^2 + 1^2 + 1^2} = \frac{2}{3}\sqrt{3}$

$C = A + a n = [2, 1, 2] - \frac{2}{3}(1, -1, 1) =$
 $= [\frac{4}{3}, \frac{5}{3}, \frac{4}{3}] \in Q$