$$P_0 = [P_{ox}, P_{oy}, P_{oz}]$$
$$\vec{n_0} = [n_{ox}, n_{oy}, n_{oz}]$$
$$\vec{b_0} = [b_{ox}, b_{oy}, b_{oz}]$$

$$V_0 = P_0 + d(\vec{n_0} - \vec{b_0})$$
$$V_1 = P_0 + d(\vec{n_0} + \vec{b_0})$$
$$V_2 = P_0 + d(-\vec{n_0} + \vec{b_0})$$
$$V_3 = P_0 + d(-\vec{n_0} - \vec{b_0})$$

Note that $\vec{b_0}$ and $\vec{n_0}$ are on the same plane as V_0, V_1, V_2, V_3