

Question #15350 Is this linear transformation? $L([x, y, z]) = [0, 0, 0]$

Solution.. One need to verify, whether $L(\alpha_1[x_1, y_1, z_1] + \alpha_2[x_2, y_2, z_2]) = \alpha_1L([x_1, y_1, z_1]) + \alpha_2L([x_2, y_2, z_2])$ for any α_1, α_2 and $[x_i, y_i, z_i], i = 1, 2$. But this obviously holds, due to both sides equal zero.