

Problem Calculate an equation for the plane containing the point $(3, -1, 2)$ and perpendicular to the vector $\vec{i} - \vec{j} + 2\vec{k}$.

Problem Give parametric and implicit descriptions of the line through the points $(1, 2, 3)$ and $(-1, 0, 2)$.

Problem Give an equation for the plane containing the three points $(1, 0, 1)$, $(2, 1, 1)$, $(-1, 1, 0)$.

Problem Find a value for A so that the planes

$$8x - 6y + 9Az = 6$$

and

$$Ax + y + 2z = 3$$

are parallel.

Problem Give a parametric equation for the line through $(5, 0, 6)$ that is perpendicular to the plane $2x - 3y + 5z = -1$.