Answer on Question #75760, Math / Calculus | for completion

From the equation of the plane passing through (2, 3,-1) and perpendicular to the line joining the points (3,4,-1) and (2,-1,5).

Solution:

We can write the equation of the plane in such way: A(x-x$_0$)+B(y-y$_0$)+C(z-z$_0$)=0, where $\bar{n} = (A, B, C)$ is normal vector, P$_0$=(x$_0$, y$_0$, z$_0$) is point on the plane.

We can use coordinates of two points on the line to find the normal vector. $\bar{n} = (3 - 2, 4 - (-1), -1 - 5) = (5, 5, -6)$.

Now we can write the equation of the plane:

5(x-2)+5(y-3)-6(z+1)=0

5x-10+5y-15-6z-6=0

Finally, simplifying we get:

5x+5y-6z-31=0.