Cartesian Form of Equation of a Straight Line

Examples

1. Find the Cartesian equation of the line with equation $r=\left(\begin{matrix}4\\3\\-2\end{matrix}\right)+λ\left(\begin{matrix}-1\\2\\5\end{matrix}\right)$.
2. Find the Cartesian equation of the line with equation $r=\left(\begin{matrix}2\\5\\0\end{matrix}\right)+λ\left(\begin{matrix}1\\3\\-2\end{matrix}\right)$.
3. The Cartesian equation of a line is $y=3x+2$. Find the vector form of the equation of the line.
4. The Cartesian equation of a line is $\frac{x-2}{3}=\frac{y+5}{1}=\frac{z}{4}$. Find the vector form of the equation of the line.

Ex 9A pg 173