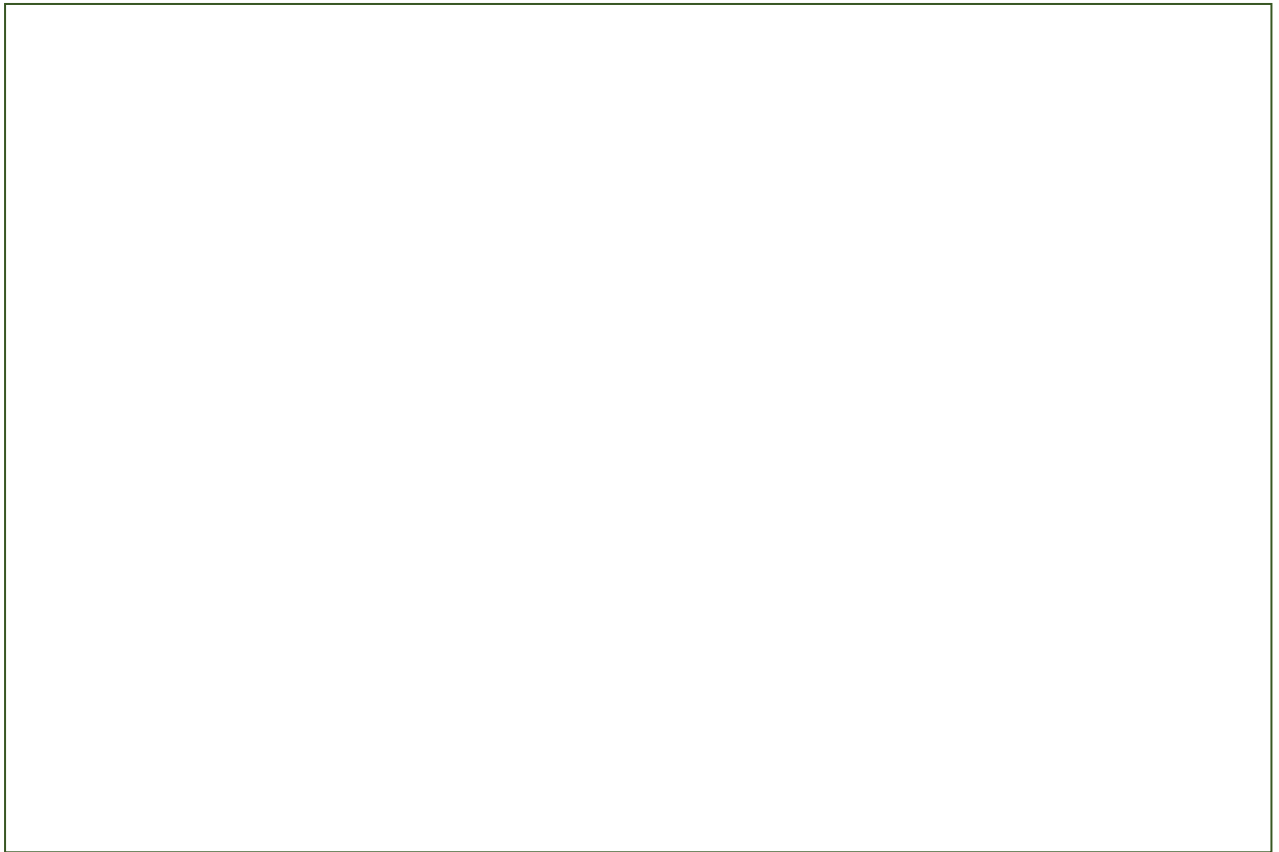


## Cartesian Form of Equation of a Straight Line



### Examples

1. Find the Cartesian equation of the line with equation  $\mathbf{r} = \begin{pmatrix} 4 \\ 3 \\ -2 \end{pmatrix} + \lambda \begin{pmatrix} -1 \\ 2 \\ 5 \end{pmatrix}$ .

2. Find the Cartesian equation of the line with equation  $\mathbf{r} = \begin{pmatrix} 2 \\ 5 \\ 0 \end{pmatrix} + \lambda \begin{pmatrix} 1 \\ 3 \\ -2 \end{pmatrix}$ .

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.