Further Vectors - 2022 GCE Pure Core 1 Further Math A Y540

1. June/2022/Paper_ Y540/01/No.4

Determine the acute angle between the line
$$\mathbf{r} = \begin{pmatrix} -\sqrt{3} \\ 1 \\ 3 \end{pmatrix} + \lambda \begin{pmatrix} 1 \\ 2\sqrt{3} \\ -\sqrt{3} \end{pmatrix}$$
 and the y-axis. [4]