

Worksheet: Three-Dimensional Geometry

IB · Class 12 · Mathematics · 3 questions · 13 marks

Name: _____

Date: _____

Score: _____ / 13

Q1. Find the vector and Cartesian equations of the line through $(1, 2, 4)$ with direction ratios $(2, 1, 3)$. [3 marks]

Q2. Find the distance of the point $(2, 3, 5)$ from the plane $x + 2y - 2z = 9$. [4 marks]

Q3. Find the shortest distance between the lines $\mathbf{r} = (\hat{i} + 2\hat{j} - \hat{k}) + \lambda(\hat{j} - \hat{k})$ and $\mathbf{r} = (2\hat{i} - \hat{j} + \hat{k}) + \mu(\hat{i} + \hat{j} - 2\hat{k})$. [6 marks]
