

Worksheet: Three Dimensional Geometry

IB · Class 12 · Mathematics · 5 questions · 15 marks

Name: _____

Date: _____

Score: _____ / 15

Q1. Find the direction cosines of a line making equal angles with all three axes. [2 marks]

Q2. Find the vector equation of the line through (1,2,3) and (4,5,6). [2 marks]

Q3. Find the angle between the planes $x + 2y + 2z = 9$ and $2x + 3y + 6z = 8$. [3 marks]

Q4. Find the shortest distance between $r = (i+2j+k) + \lambda(i-j+k)$ and $r = (2i-j-k) + \mu(2i+j+2k)$. [4 marks]

Q5. Show the lines $(x-1)/2 = (y-2)/3 = (z-3)/4$ and $(x-4)/5 = (y-1)/2 = z$ are coplanar. [4 marks]
