

Worksheet: Three Dimensional Geometry

CBSE · 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 $\mathbf{r} = (\mathbf{i} + 2\mathbf{j} + \mathbf{k}) + \lambda(\mathbf{i} - \mathbf{j} + \mathbf{k})$ and $\mathbf{r} = (2\mathbf{i} - \mathbf{j} - \mathbf{k}) + \mu(2\mathbf{i} + \mathbf{j} + 2\mathbf{k})$. *[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]*
