

Worksheet: Three Dimensional Geometry

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

Name: _____	Date: _____	Score: _____ / 15
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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 $\frac{(x-1)}{2} = \frac{(y-2)}{3} = \frac{(z-3)}{4}$ and $\frac{(x-4)}{5} = \frac{(y-1)}{2} = z$ are coplanar. *[4 marks]*
