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India's Number 1 Education App

MATHS

BOOKS - TELUGU ACADEMY MATHS (TELUGU ENGLISH)

DC'S & DR'S

LAQ (1D STAR Q)

1. Find the angle between the lines whose d.c's are related by

$l + m + n = 0 \& l^2 + m^2 - n^2 = 0$

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2. Find the angle between the lines, whose direction cosines are given by the equation $3l + m + 5n = 0$ and $6mn - 2nl + 5lm = 0.$

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3. Find the direction cosines of the two lines which are connected by the relations

$l - 5m + 3n = 0, 7l^2 + 5m^2 - 3n^2 = 0$

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4. Find the direction cosines of the two lines which are connected by the relations l + m + n = 0 an mn - 2nl - 2lm = 0.

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5. Show that the lines whose direction cosines are given by $l + m + n = 0,$

$2mn + 3nl - 5lm = 0$ are perpendicular to each other .

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6. If a line makes angles $\alpha, \beta, \lambda, \delta$ with the four diagonals of a cube, then show that $\cos^2\alpha + \cos^2\beta + \cos^2\lambda + \cos^2\delta = \frac{4}{3}$.

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7. The angle between any two diagonals of a cube is

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LAQ , VSAQ (2D HARD Q)

1. ΔABC is formed by a (1,8,4), B (0, -11,4) and C(2,-3,1) . If D is the foot of the perpendicular from A to BC . Then the coordinates of D are

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2. If a line makes angles $\alpha, \beta, \lambda, \delta$ with the four diagonals of a cube, then show that $\cos^2\alpha + \cos^2\beta + \cos^2\lambda + \cos^2\delta = \frac{4}{3}$.

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3. Find the direction cosines of the line joining the points (-4,1,7),(2,-3,2)`

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4. If the d.c's of a line are $(1/c, 1/c, 1c)$ then find c.

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5. O is the origin, P(2,3,4) and Q(1,k,1) are points such that $\overline{OP} \perp \overline{OQ}$. Find k.

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6. Find the d.c's of a line that makes equal angles with the axes, and find number of such

lines.

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7. A ray makes angles $\pi/3, \pi/3$ with $\overline{OX}$ and $\overline{OY}$ respectively. Find the angle made by it with $\overline{OZ}$

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8. If α, β, γ are the angles made by a line with the positive directions of the coordinate axes,

then $\sin^2\alpha + \sin^2\beta + \sin^2\gamma =$

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MISCELLANEOUS (3D MIS Q)

1. If (1,-2,-2) and (0,2,1) are direction ratios of two lines, then direction cosines of a line perpendicular to both the lines are

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2. If the vertices of a angles are A (1 , 4, 2) , B (-2 , 1 ,2) , C (2 , 3, -4) then find $\angle A$, $\angle B$, $\angle C$.

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3. If (6,10,10),(1,0,-5), (6,-10,0) are vertices of a triangle, find the direciton ratios of its sides. Determine wherther it is right angled or isosceles.

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4. A (-1,2-3), B(5,0,-6), C(0,4,-1) are three points, Show that direction cosines of the bisectors of $\lfloor BAC$ are proportional to (25,8,5)and (-11,20,23).

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