

NCERT/CBSE MATHEMATICS CLASS 12 textbook

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MISCELLANEOUS EXERCISES

Solutions to NCERT/CBSE MATH (Class XII) textbook

Chapter 11

THREE DIMENSIONAL GEOMETRY

23. The planes: $2x - y + 4z = 5$ and $5x - 2.5y + 10z = 6$ are

(A) Perpendicular

(B) Parallel

(C) intersect y -axis

(D) passes through $\left(0, 0, \frac{5}{4}\right)$

Answer:23

Equations of planes are

$$2x - y + 4z = 5$$

$$5x - 2.5y + 10z = 6$$

Comparing the coefficients of x, y, z

$$\frac{2}{5} = \frac{-1}{-2.5} = \frac{4}{10}$$

The planes $a_1x + b_1y + c_1z = d_1$

and $a_2x + b_2y + c_2z = d_2$ are parallel

$$\frac{a_1}{a_2} = \frac{b_1}{b_2} = \frac{c_1}{c_2}$$

\therefore From (3), this condition is satisfied.

Please do not copy the answer given here

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