



MATHS

BOOKS - CENGAGE

EQUATION OF A STRAIGHT LINE - I

Worked Examples

1. What is the inclination of the line whose slopes are as follows:

1



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2. What is the inclination of the line whose slopes are as follows:

$$\sqrt{3}$$



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3. The line joining $A(-6, -8)$ and $B(4, -2)$ is parallel to the line joining $C(2, -4)$ and $D(0, p)$. Find p .



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4. Find the value of a if $A(2, 3)$, $B(-5, -0)$, and $(-2, \frac{a}{7})$ are collinear.



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5. If

$A = (5, 2)$, $B = (-9, -3)$, and $C = (-3, -5)$

are the vertices of a triangle ABC, find the slope of the altitude from C to AB.



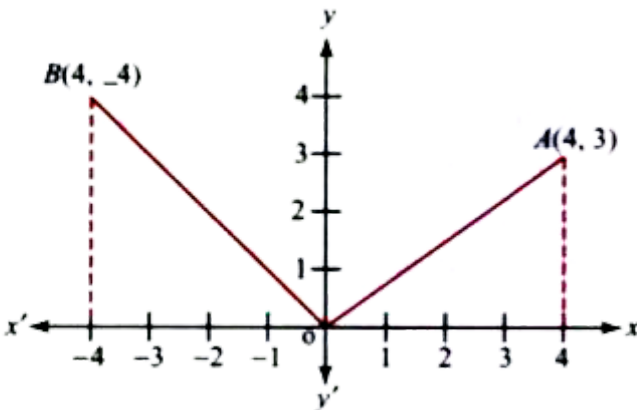
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6. A line with slope $-\frac{1}{3}$ passes through $(-1, -2)$ and $(p, 4)$. Find p .



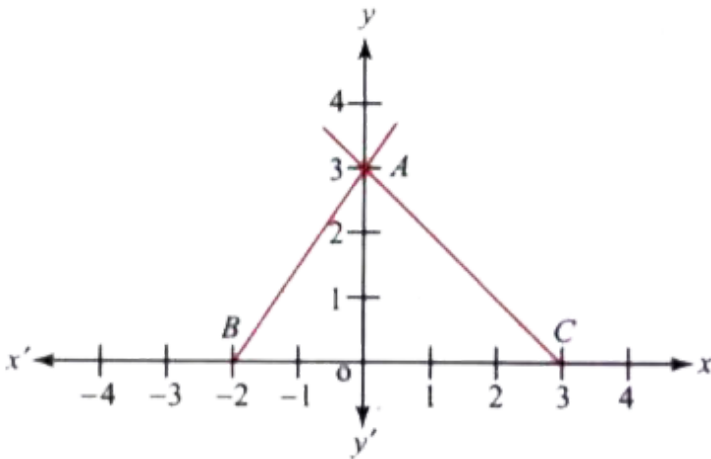
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7. In the diagram, find the inclination of the line OB and also find the slope of the straight lines OA and OB.



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8. Find the inclination of AC and the slope of AC and intercepts on the x-axis and y-axis by the line AC.



Also, find the slope of AB and the y-intercept made by the line AB.

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9. Let the equation of a line be $4x - 5y + 2 = 0$.

If the points $(\alpha, 3)$ lie on the line, find α .



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10. The equation of a line is $3(x - y) + 4 = 0$.

Find its slop, inclination, and intercept on the y-axis.



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11. Find the equation of a line passing through $(1, -4)$ and cutting of intercepts, equal but of opposite sign, from the two axes.



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