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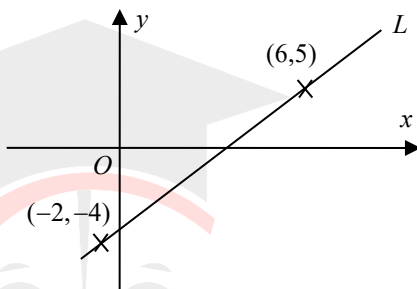
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Revision of Equations of Straight Lines (I)

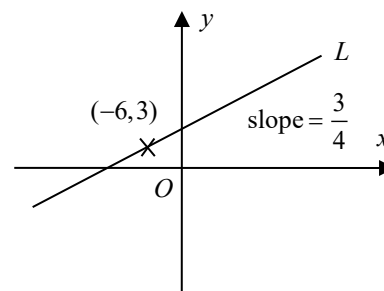
Exercises

1. In the following figures, find the equations of the straight lines L .

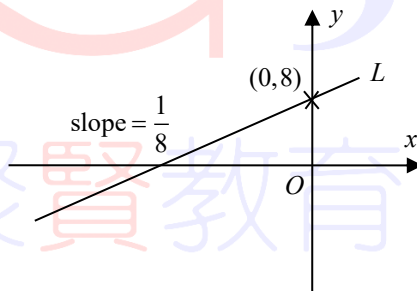
(a)



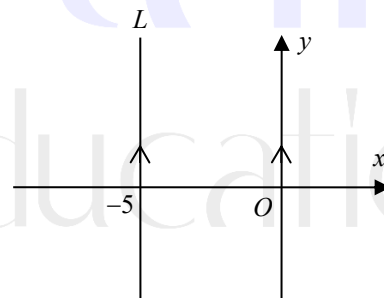
(b)



(c)

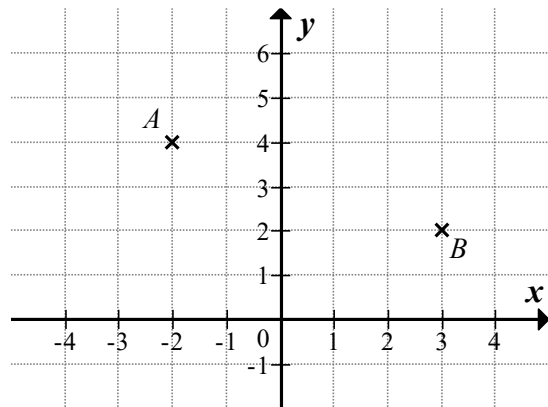


(d)

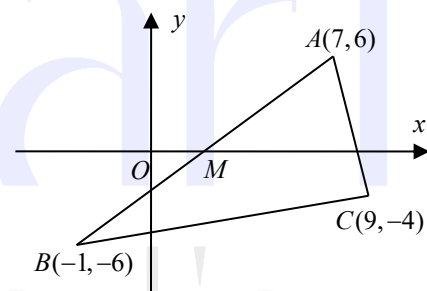


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2. Two points A and B are marked in the figure.
- (a) Write down the coordinates of A and B .
 - (b) Find the equation of the straight line joining A and B .

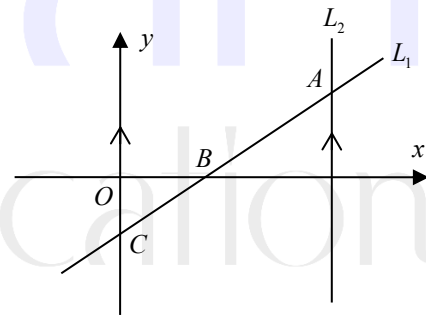


3. In the figure, $A(7,6)$, $B(-1,-6)$ and $C(9,-4)$ are the vertices of a $\triangle ABC$. AB cuts the x -axis at M .
- (a) Show that $\triangle ABC$ is a right-angled triangle.
 - (b) Find the coordinates of M .
 - (c) Hence show that $AM = MB$.
 - (d) If a circle is drawn with M as centre and AM as radius, will the circle pass through C ?



4. Two straight lines $L_1 : y = 5x + 4$ and $L_2 : y = 3x + 2$ are given. Let A be the point of intersection of L_1 and L_2 ,
- find the coordinates of A .
 - find the mid-point of A and $O(0,0)$.
 - find the slope of OA .
 - find the equation of the straight line which passes through the mid-point of OA and is perpendicular to OA .

5. In the figure, the straight line L_1 cuts the x -axis at B and the y -axis at C . The y -intercept and the slope of L_1 are -8 and $\frac{3}{2}$ respectively. L_2 is a line parallel to the y -axis and cuts L_1 at A .
- Find the equation of L_1 .
 - If B is the mid-point of AC , find the equation of L_2 .



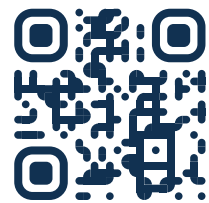
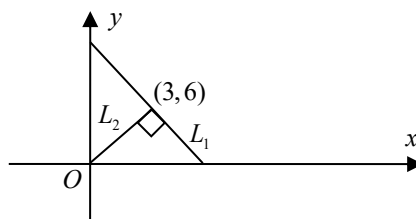
S4E-8A

6. Show that the three straight lines $L_1 : x + 5y - 28 = 0$, $L_2 : 3x - y - 20 = 0$ and $L_3 : 2x - 6y + 8 = 0$ meet at a point.

M.C.

1. Which of the following straight lines is parallel to the y -axis?
- A. $x + y = 4$
 - B. $x = 7$
 - C. $y = -2$
 - D. $x - y = -2$
2. Find the point of intersection of the lines $3x + 4y = -5$ and $x + 2y = 3$.
- A. $(-11, 7)$
 - B. $(-7, 11)$
 - C. $(11, -7)$
 - D. $(7, -11)$
3. In the figure, the straight lines L_1 and L_2 intersect at $(3, 6)$. Find the equation of L_1 .

- A. $x - 2y = 10$
- B. $x + 2y = 15$
- C. $x + y = 3$
- D. $2x - y = 6$



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