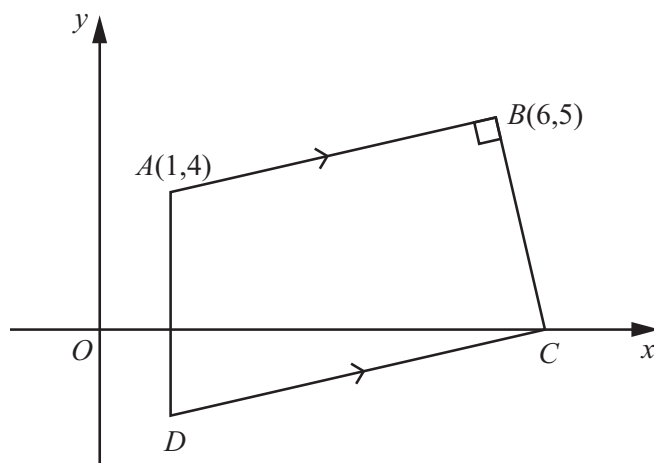


1)

Solutions to this question by accurate drawing will not be accepted.



The diagram shows a quadrilateral $ABCD$ in which A is the point $(1, 4)$ and B is the point $(6, 5)$. Angle ABC is a right angle and the point C lies on the x -axis. The line AD is parallel to the y -axis and the line CD is parallel to BA . Find

- (i) the equation of the line CD , [5]
- (ii) the area of the quadrilateral $ABCD$. [4]

2)

The points A and B have coordinates $(-2, 15)$ and $(3, 5)$ respectively. The perpendicular to the line AB at the point A $(-2, 15)$ crosses the y -axis at the point C . Find the area of the triangle ABC . [6]

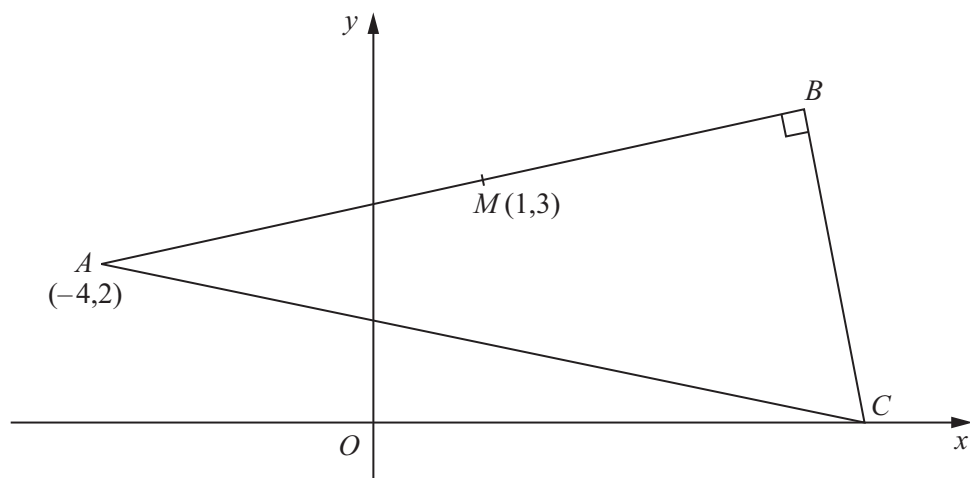
3)

The line $y = 3x - 9$ intersects the curve $49x^2 - y^2 + 42x + 8y = 247$ at the points A and B . Find the length of the line AB . [7]

4)

Find the coordinates of the points where the line $2y = x - 1$ meets the curve $x^2 + y^2 = 29$. [5]

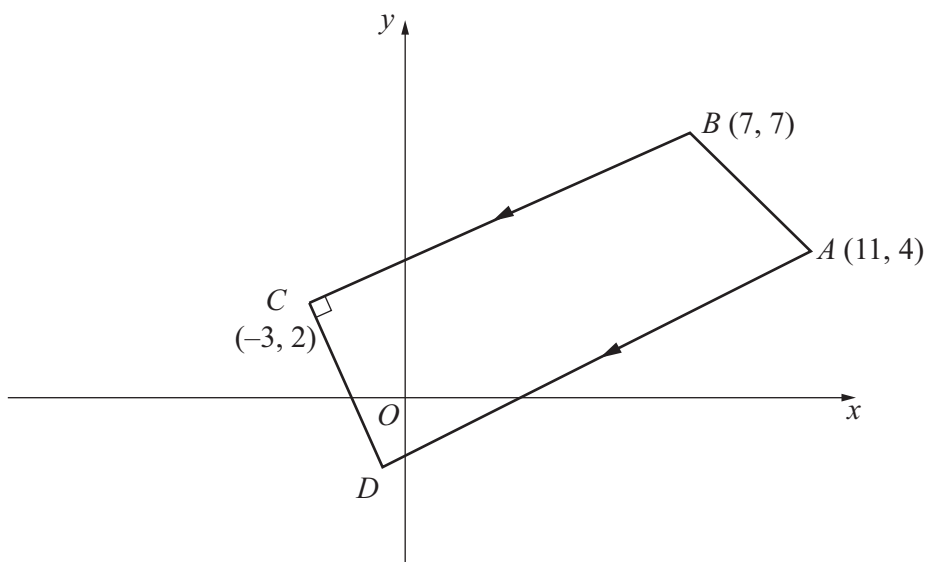
5)



The figure shows a right-angled triangle ABC , where the point A has coordinates $(-4, 2)$, the angle B is 90° and the point C lies on the x -axis. The point $M(1, 3)$ is the midpoint of AB . Find the area of the triangle ABC . [7]

- 6) The point P lies on the line joining $A(-1, -5)$ and $B(11, 13)$ such that $AP = \frac{1}{3}AB$.
- (i) Find the equation of the line perpendicular to AB and passing through P . [5]

- 7) **Solutions to this question by accurate drawing will not be accepted.**



The diagram shows a trapezium $ABCD$ with vertices $A(11, 4)$, $B(7, 7)$, $C(-3, 2)$ and D . The side AD is parallel to BC and the side CD is perpendicular to BC . Find the area of the trapezium $ABCD$. [9]