

Higher Past Paper Questions

The Straight Line

2001(1)

1. Find the equation of the straight line which is parallel to the line with equation $2x + 3y = 5$ and which passes through the point $(2, -1)$. 3

2003(1)

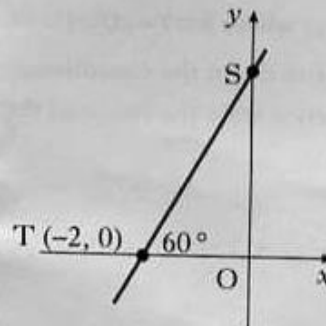
1. Find the equation of the line which passes through the point $(-1, 3)$ and is perpendicular to the line with equation $4x + y - 1 = 0$. 3

2004(1)

1. The point A has coordinates $(7, 4)$. The straight lines with equations $x + 3y + 1 = 0$ and $2x + 5y = 0$ intersect at B.
- (a) Find the gradient of AB. 3
- (b) Hence show that AB is perpendicular to only one of these two lines. 5

2005(1)

1. Find the equation of the line ST, where T is the point $(-2, 0)$ and angle STO is 60° .

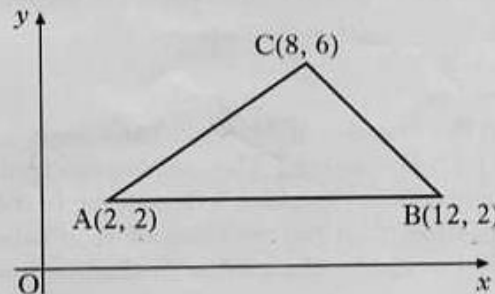


3

2001(2)

7. Triangle ABC has vertices A(2, 2), B(12, 2) and C(8, 6).

- (a) Write down the equation of l_1 , the perpendicular bisector of AB. 1
- (b) Find the equation of l_2 , the perpendicular bisector of AC. 4
- (c) Find the point of intersection of lines l_1 and l_2 . 1
- (d) Hence find the equation of the circle passing through A, B and C. 2

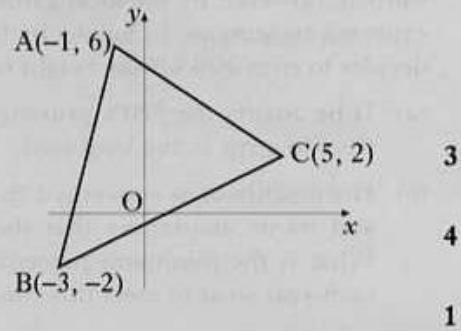


2002(2)

1. Triangle ABC has vertices A(-1, 6), B(-3, -2) and C(5, 2).

Find

- the equation of the line p , the median from C of triangle ABC.
- the equation of the line q , the perpendicular bisector of BC.
- the coordinates of the point of intersection of the lines p and q .

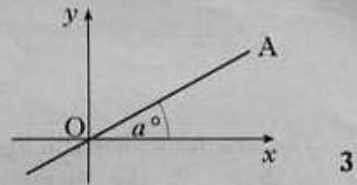


2004(2)

1. (a) The diagram shows line OA with equation $x - 2y = 0$.

The angle between OA and the x -axis is a° .

Find the value of a .



- (b) The second diagram shows lines OA and OB. The angle between these two lines is 30° .

Calculate the gradient of line OB correct to 1 decimal place.

