## The Line (Q 2, Paper 2)

## Lesson No. 5: Equation of a Line I

## 2007

2 (b) The line $L$ intersects the $x$-axis at $(-4,0)$ and the $y$-axis at $(0,6)$.
(i) Find the slope of $L$.
(ii) Find the equation of $L$.

The line $K$ passes through $(0,0)$ and is perpendicular to $L$.
(iii) Show the lines $L$ and $K$ on a co-ordinate diagram.
(iv) Find the equation of $K$.

## 2001

2 (a) The point $(t, 2 t)$ lies on the line $3 x+2 y+7=0$.
Find the value of $t$.

## 1999

2 (a) The point $(k, 1)$ lies on the line $4 x-3 y+15=0$.
Find the value of $k$.
(b) $p(4,3), q(-1,0)$ and $r(10,3)$ are three points.
(i) Find the slope of $p q$.
(ii) Find the equation of the line through $r$ which is parallel to $p q$.
(iii) Find the equation of the line which is perpendicular to $p q$ and which contains the origin.

## 1998

2 (a) The point $(-3,4)$ is on the line whose equation is $5 x+y+k=0$. Find the value of $k$.

## 1996

2 (b) The equation of the line $M$ is $y-4 x-c=0$.
$M$ contains the point $p(1,6)$.
(i) Find the value of $c$.
(ii) The origin is the midpoint of [pq].

Find the equation of the line $K$ if $K$ is parallel to $M$ and $K$ contains the point $q$.
(iii) Find the equation of the line $L$ if $L$ is perpendicular to $M$ and $L$ contains the point $q$.

## Answers

20072 (b) (i) $\frac{3}{2}$
(ii) $3 x-2 y+12=0$
(iii)

(iv) $2 x+3 y=0$

20012 (a) $t=-1$
19992 (a) $k=-3$
(b) (i) $\frac{3}{5}$
(ii) $3 x-5 y-15=0$
(iii) $5 x+3 y=0$

19982 (a) $k=11$
19962 (b) (i) $c=2$
(ii) $K: 4 x-y-2=0$
(iii) $L: x+4 y+25=0$

