## The Line (Q 2, Paper 2)

2001
2 (a) The point $(t, 2 t)$ lies on the line $3 x+2 y+7=0$.
Find the value of $t$.
(b) $a(4,2), b(-2,0)$ and $c(0,4)$ are three points.
(i) Prove that $a c \perp b c$.
(ii) Prove that $|a c|=|b c|$.
(iii) Calculate the area of the triangle bac.
(iv) The diagonals of the square bahg intersect at $c$.

Find the co-ordinates of $h$ and the co-ordinates of $g$.
(v) Find the equation of the line $b c$ and show that $h$ lies on this line.

## Answers

2 (a) $t=-1$
(b) (iii) $10 \quad$ (iv) $g(-4,6), h(2,8)$
(v) $2 x-y+4=0$

