

- 2 The point  $A$  has coordinates  $(-5, 3)$ , the point  $B$  has coordinates  $(4, 0)$  and the point  $C$  has coordinates  $(-1, 5)$ .

The line  $l$  passes through  $C$  and is perpendicular to  $AB$ .

- (a) Find an equation of  $l$ .

Give your answer in the form  $ax + by + c = 0$  where  $a$ ,  $b$  and  $c$  are integers.

(4)

The line  $l$  intersects  $AB$  at the point  $D$ .

- (b) Show that the coordinates of  $D$  are  $(-2, 2)$ .

(3)

- (c) Show that  $l$  is not the perpendicular bisector of  $AB$ .

(2)

- (d) Find the value of  $\tan \angle ABC$ .

Give your answer in its simplest form.

(4)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



**Question 2 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Area for writing answers, consisting of multiple horizontal dotted lines.



## Question 2 continued

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

**Question 2 continued**

Handwriting practice area with horizontal dotted lines.

**(Total for Question 2 is 13 marks)**

