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)

Question 2 continued

Question 2 continued

Question 2 continued

(Total for Question 2 is 13 marks)