C_1 and C_2

5. The curve C_1 has equation

coordinate axes. (ii) State the equations of any asymptotes to the curve
$$C_1$$

The curve C_2 has equation

(b) Show that C_1 and C_2 intersect when

s) Show that
$$C_1$$
 and C_2 intersect when

$$3x^3 - 4x^2 - 13x - 6 = 0$$

and
$$C_2$$
 intersect when

Given that the x coordinate of one of the points of intersection is $-\frac{2}{3}$

 $v = 3x^2 - 4x - 10$

(c) use algebra to find the x coordinates of the other points of intersection between

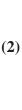
(Solutions relying on calculator technology are not acceptable.)

(a) (i) Sketch C_1 stating the coordinates of any points where the curve cuts the

$$=3x^2-4x-10$$

 $y = \frac{6}{x} + 3$

(3)







(4)