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2. Express 8^{2x+3} in the form 2^y , stating y in terms of x .

(2)

Q2

(Total 2 marks)



P 4 1 4 8 8 A 0 3 3 2

6.

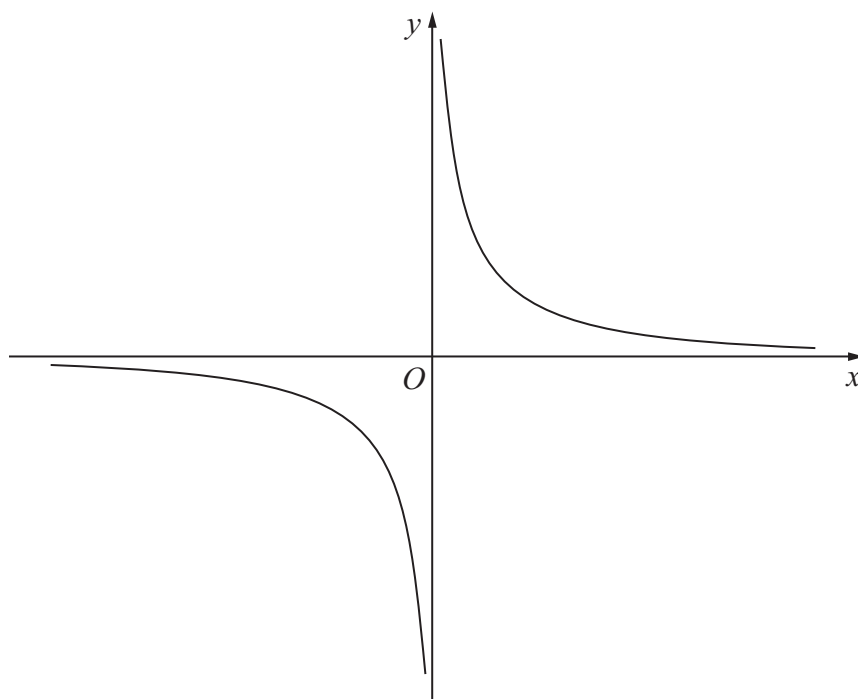
**Figure 1**

Figure 1 shows a sketch of the curve with equation $y = \frac{2}{x}$, $x \neq 0$

The curve C has equation $y = \frac{2}{x} - 5$, $x \neq 0$, and the line l has equation $y = 4x + 2$

- (a) Sketch and clearly label the graphs of C and l on a single diagram.

On your diagram, show clearly the coordinates of the points where C and l cross the coordinate axes.

(5)

- (b) Write down the equations of the asymptotes of the curve C .

(2)

- (c) Find the coordinates of the points of intersection of $y = \frac{2}{x} - 5$ and $y = 4x + 2$

(5)

