**8:** **In this question you must show all stages of your working.**
**Solutions relying entirely on calculator technology are not acceptable.**

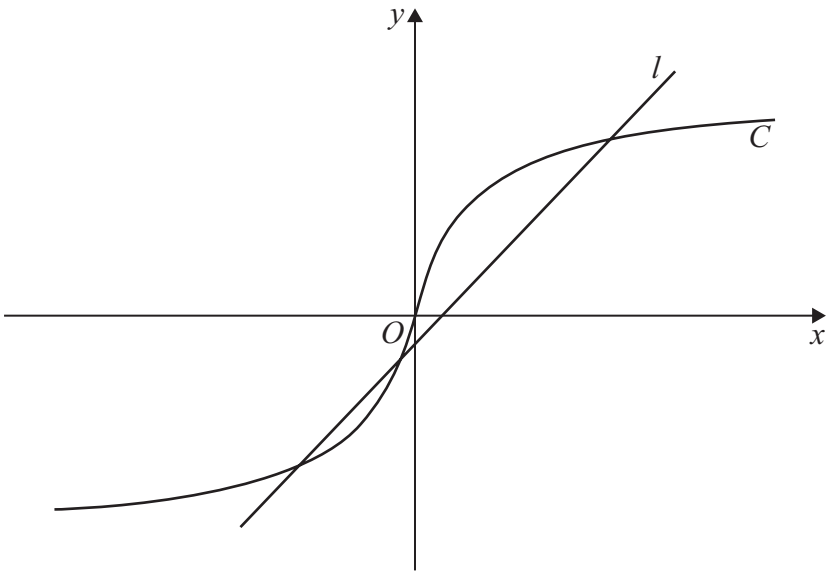



**Figure 2**

Figure 2 shows a sketch of the curve $C$ with equation $y = \dfrac{15x}{|x| + 4}$ and the line $l$ with equation $y = x - 2$

(a) Use algebra to determine the exact values of $x$ for which

$$x - 2 > \frac{15x}{|x| + 4}$$

**(6)**

(b) Hence use algebra to determine the exact values of $x$ for which

$$|x - 2| > \left|\frac{15x}{|x| + 4}\right|$$

**(4)**

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**Question 8 continued**

**(Total for Question 8 is 10 marks)**

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