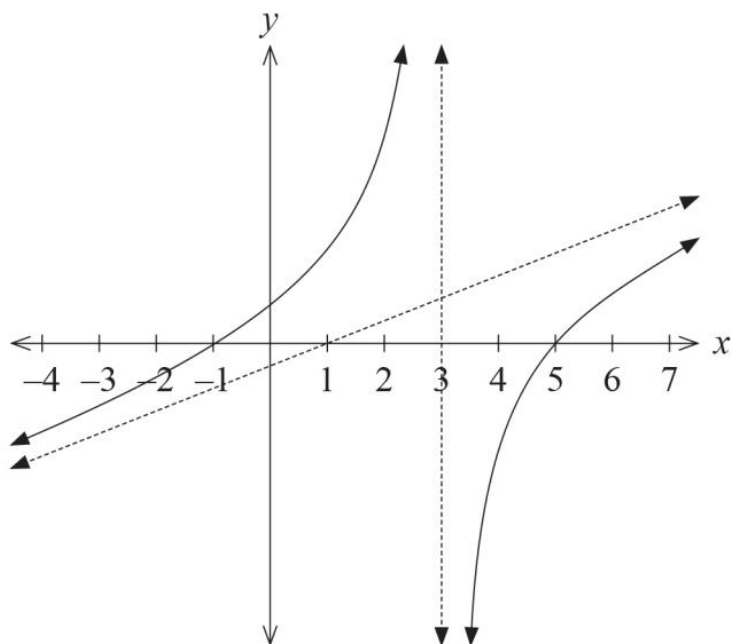**Question 5** (5 marks)

The graph of function $f(x) = \dfrac{(x+a)(x-b)}{2(x-c)}$ is shown below. The constants a, b and c are positive.

(a) Determine the values for a, b and c. Justify your answer for c. (3 marks)

The inclined asymptote for the graph of $y = f(x)$ is shown.

(b) Determine the equation for the inclined asymptote. (2 marks)