

Exercise 1

Calc. : ✖

The diagram below shows the graph of the function $f(x) = \frac{ax+b}{x+c}$.

The dotted blue lines represent the asymptotes. The graph passes through the point $(0, -\frac{1}{2})$.

1. Give the equation of the vertical asymptote. 2 marks
2. State the domain of the function. 2 marks
3. Find value of c . 2 marks
4. Give the equation of the horizontal asymptote. 2 marks
5. State the range of the function. 2 marks
6. Find value of a . 2 marks
7. A student says that the value of b is 1. Are they correct? You must justify your answer. 2 marks

