6 The curve C has equation $y = \frac{x^2 + a^2}{x + a}$, where a is a positive constant.

(a) Find the equations of the asymptotes of C. [3]

(b) Find, in terms of a, the x-coordinates of the stationary points on C. [3]

(e) Find the set of values of a for which $\left|\frac{x^2 + a^2}{x + a}\right| = a$ has two real solutions. [4]