5.

To find the vertical asymptote :
We must set the denominator equal to 0 and solve:
$c^4-625=0$
$(c^2-25)(c^2+25)=0$
$(c^2-25)=0$
$(c-5)(c+5)=0$
$c=5$ or $c=-5$
There is vertical asymptote at $c=5$ and at $c=-5$
To find the horizontal asymptote :
First we must compare the degrees of the polynomials.
The numerator contains a 3^{rd} degree polynomial while the denominator contains a 4^{th} degree polynomial.
Since the polynomial in the numerator is a lower degree than the denominator, the horizontal asymptote is located at $k=0$.
To find the oblique asymptote :
Since the degrees of the numerator are less than the degrees of the denominator, this rational does not have an oblique asymptote