5.

To find the vertical asymptote :
We must set the denominator equal to 0 and solve:
$d^4-16=0$
$(d^2-4)(d^2+4)=0$
$(d^2-4)=0$
$(d-2)(d+2)=0$
$d=2$ or $d=-2$
There is vertical asymptote at $d=2$ and at $d=-2$
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 $a=0$.
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