5.

It so happens that this function can be simplified as:

$$s(h) = \frac{-1+h^3}{-5+4h+h^2}$$

$$= \frac{(h-1)\left(h^2+h+1\right)}{(h-1)(h+5)}$$

$$= \frac{h^2+h+1}{h+5}$$

To find the vertical asymptote :

$h+5=0$

$h=-5$

There is a vertical asymptote at $h=-5$

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 2^{nd} degree polynomial.

Since the polynomial in the numerator is a higher degree than the denominator, there is no horizontal asymptote.

To find the oblique asymptote :

we must divide the numerator by the denominator $\frac{-1+h^3}{-5+4h+h^2} = \frac{h^2+h+1}{h+5} = \frac{21}{h+5} + (h-4)$

There is an oblique asymptote at $g=h-4$