5.

It so happens that this function can be simplified as:

$$s(e) = \frac{-27+e^3}{-6-e+e^2}$$

$$= \frac{(e-3)\left(e^2+3e+9\right)}{(e-3)(e+2)}$$

$$= \frac{e^2+3e+9}{e+2}$$

To find the vertical asymptote :

$e + 2 = 0$

$e = -2$

There is a vertical asymptote at $e = -2$

To find the horizontal asymptote :

First we must compare the degrees of the polynomials.

The numerator contains a 3rd degree polynomial while the denominator contains a 2nd 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 $\frac{-27+e^3}{-6-e+e^2} = \frac{e^2+3e+9}{e+2} = \frac{7}{e+2} + (e+1)$

There is an oblique asymptote at $h = e + 1$