3.

It so happens that this function can be simplified as:

$$a(s) = \frac{-125+s^3}{-25+s^2}$$

$$= \frac{(s-5)\left(s^2+5s+25\right)}{(s-5)(s+5)}$$

$$= \frac{s^2+5s+25}{s+5}$$

To find the vertical asymptote :

$$s + 5 = 0$$

$$s = -5$$

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

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 $\frac{-125+s^3}{-25+s^2} = \frac{s^2+5s+25}{s+5} = \frac{25}{s+5} + s$

There is an oblique asymptote at $g=s$