1.

It so happens that this function can be simplified as:

$$m(g) = \frac{-64+g^3}{-12-g+g^2}$$

$$= \frac{(g-4)\left(g^2+4g+16\right)}{(g-4)\,(g+3)}$$

$$= \frac{g^2+4g+16}{g+3}$$

To find the vertical asymptote :

$g + 3 = 0$

$g = -3$

There is a vertical asymptote at $g = -3$

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 $\frac{-64+g^3}{-12-g+g^2} = \frac{g^2+4g+16}{g+3} = \frac{13}{g+3} + (g+1)$

There is an oblique asymptote at $j = g + 1$