1.

It so happens that this function can be simplified as:

$$b(c) = \frac{-1+c^3}{-2+c+c^2}$$

$$= \frac{(c-1)\left(c^2+c+1\right)}{(c-1)\,(c+2)}$$

$$= \frac{c^2+c+1}{c+2}$$

To find the vertical asymptote :

$c + 2 = 0$

$c = -2$

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

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 $\frac{-1+c^3}{-2+c+c^2} = \frac{c^2+c+1}{c+2} = \frac{3}{c+2} + (c - 1)$

There is an oblique asymptote at $p = c - 1$