It so happens that this function can be simplified as:

a (c) = $\frac{-27+c^3}{-15+2 c+c^2}$

$$= \frac{(c-3) (c^2+3 c+9)}{(c-3) (c+5)}$$

$$c^2+3 c+9$$

 $=\frac{c^2+3\ c+9}{c+5}$

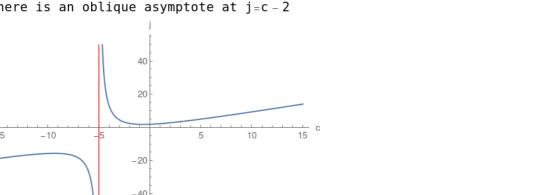
$$= \frac{c^2 + 3 c + 9}{c + 5}$$
To find the vertical asymptote :

c + 5 = 0C = -5There is a vertical asymptote at c=-5

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 $\frac{-27+c^3}{15\cdot 2\cdot c \cdot c^2} = \frac{c^2+3\cdot c+9}{c+5} = \frac{19}{c+5} + (c-2)$ There is an oblique asymptote at j=c-2



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