5.

It so happens that this function can be simplified as:

$$p(c) = \frac{-25+5c+12c^2}{5+3c}$$

$$= \frac{(3c+5)(4c-5)}{3c+5}$$

$$= 4c - 5$$

To find the vertical asymptote :

There is no vertical asymptote

To find the horizontal asymptote :

First we must compare the degrees of the polynomials.

The numerator contains a 2^{nd} degree polynomial while the denominator contains a 1^{st} 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 and so the oblique asymptote $w = 4c - 5$