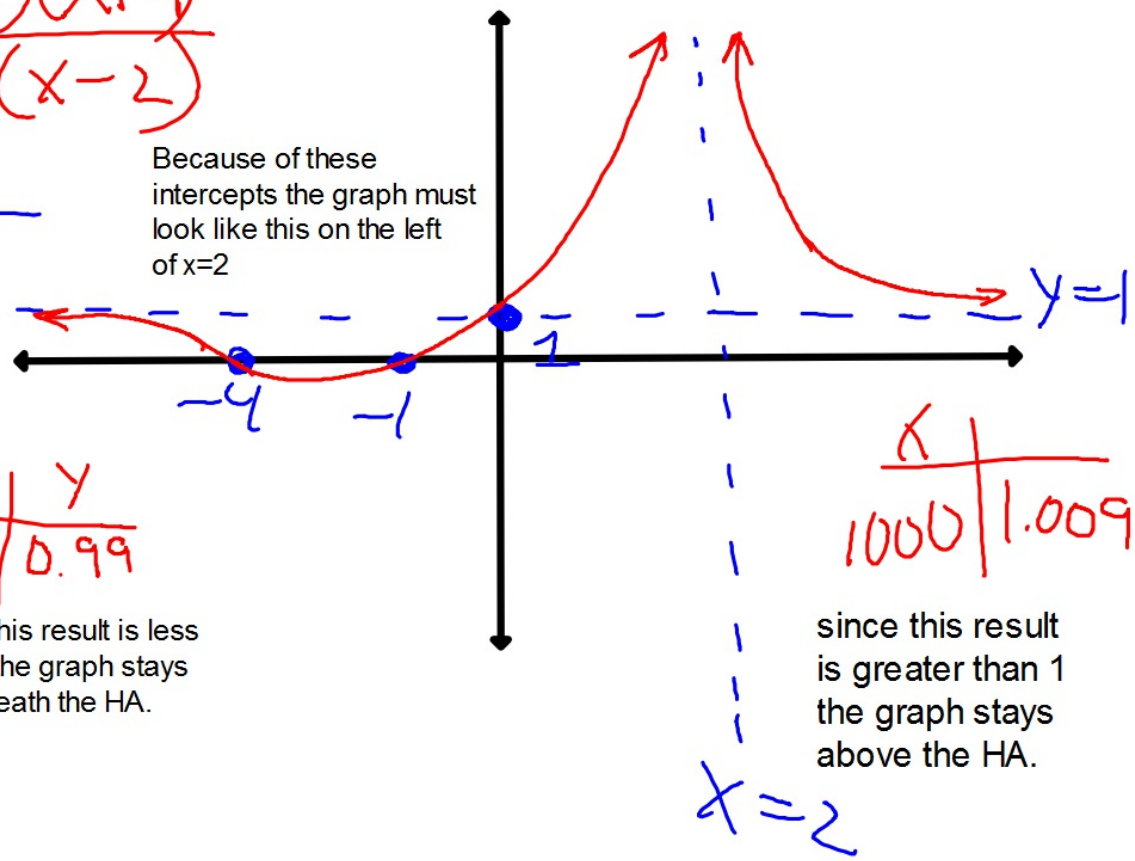
$$y = \frac{x^2 + 5x + 4}{x^2 - 4x + 4} = \frac{(x+1)(x+4)}{(x-2)(x-2)}$$

HA: $y = 1$

VA: $x = 2$

y-int: 1

x-int: $-1, -4$




| x | y |
|---|---|
| -1000 | 0.99 |

Since this result is less than 1 the graph stays underneath the HA.

| x | y |
|---|---|
| 1000 | 1.009 |

since this result is greater than 1 the graph stays above the HA.

| x | y |
|---|---|
| 2.1 | + + / + + = ⊕ |

To the right of x=2 the graph rises.

Normally when a graph goes up on one side of a vertical asymptote is goes down on the other side. But because of the double factor in the denominator of this rational function the graph does the same thing on both side (rises on both side of the VA x=2)

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