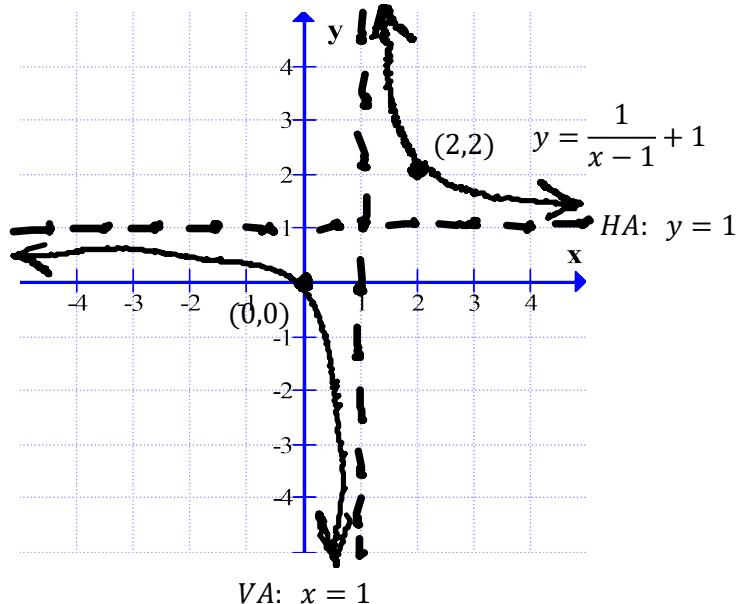


C12 - 9.2 - Graph HT VT Add Fractions Long Div Notes



$$\begin{array}{r}
 \begin{array}{c}
 \frac{1}{x-1} + 1 \\
 \frac{1}{x-1} + 1 \times \frac{x-1}{x-1} \\
 \frac{1}{x-1} + \frac{x-1}{x-1} \\
 \hline
 \frac{(x-1)(x-1)}{x-1} \\
 \frac{x}{x-1}
 \end{array}
 &
 \begin{array}{c}
 \frac{1}{x-1} \\
 x-1 \overline{) x+0} \\
 \underline{x-1} \\
 1
 \end{array}
 \end{array}$$

$$y = \frac{x}{x-1} \quad \frac{x}{x-1} = \frac{1}{x-1} + 1$$

$x - int:$

$$\begin{aligned}
 y &= \frac{1}{x-1} + 1 \\
 0 &= \frac{1}{x-1} + 1 \\
 -1 &= \frac{1}{x-1} \\
 (x-1) \times -1 &= \frac{1}{x-1} \times (x-1) \\
 -x+1 &= 1 \\
 x &= 0
 \end{aligned}$$

(0,0)

$y - int:$

$$\begin{array}{ll}
 y = \frac{x}{x-1} & y = \frac{1}{x-1} + 1 \\
 \text{Careful! } 0 = \frac{x}{x-1} & y = \frac{1}{0-1} + 1 \\
 (x-1) \times 0 = \frac{x}{x-1} \times (x-1) & y = \frac{1}{0-1} + 1 \\
 0 = x & y = -1 + 1 \\
 x = 0 & y = 0
 \end{array}$$

(0,0)

x	y
0	0
1	und
2	2