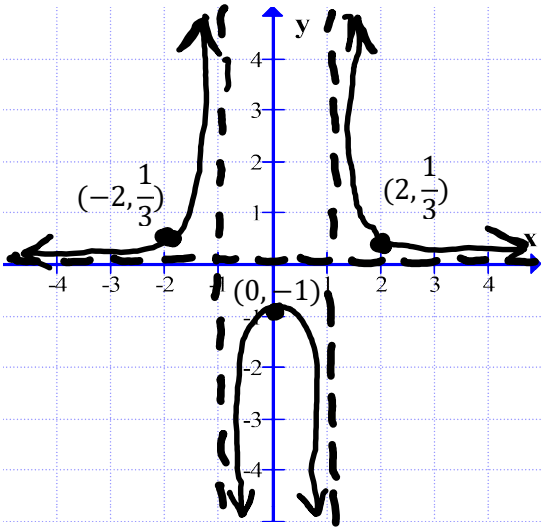
C12 - 9.4 - Graph 2xVA's Notes



$VA:\ x=-1$ $VA:\ x=1$

$y=\frac{1}{x^2-1}$

$HA:\ y=0$

x	y
-2	$\frac{1}{3}$
-1	und
0	-1
1	und
2	$\frac{1}{3}$

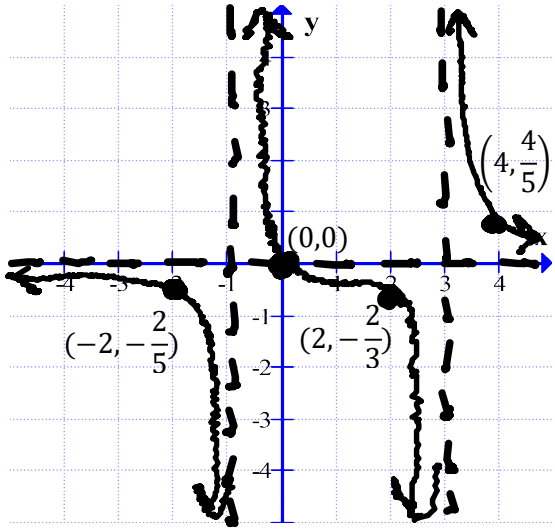
$VA:$ $x^2-1=0$
$(x+1)(x-1)=0$

$x+1=0$ $x-1=0$
$x=-1$ $x=1$

$x-int:$ $y=\frac{1}{x^2-1}$
$0=\frac{1}{x^2-1}$
$0\neq 1$

$y-int:$ $y=\frac{1}{x^2-1}$
$y=\frac{1}{0^2-1}$
$y=-1$

$(0,-1)$



$VA:\ x=-1$ $VA:\ x=3$

$y=\frac{x}{x^2-2x-3}$

$HA:\ y=0$

x	y
-2	$-\frac{2}{5}$
-1	und
0	0
2	$-\frac{2}{3}$
3	und
4	$\frac{4}{5}$

$VA:$ $x^2-2x-3=0$
$(x+1)(x-3)=0$

$x+1=0$ $x-3=0$
$x=-1$ $x=3$

$x-int:$
$0=\frac{x}{x^2-2x-3}$
$0=x$
$x=0$

$y-int:$
$y=\frac{0}{0^2-2(0)-3}$
$y=0$

(0,0)