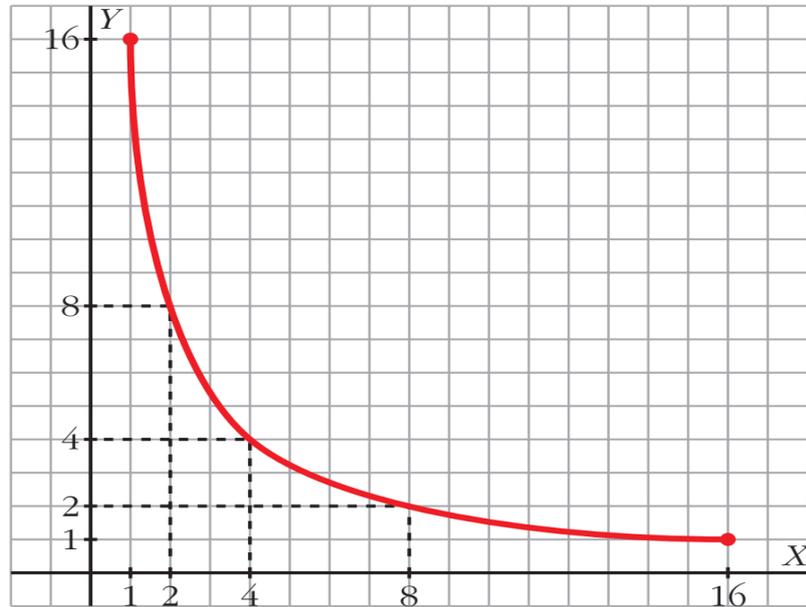


HOJA 1 DE EJERCICIOS RESUELTOS

UNIDAD 8: **FUNCIONES RACIONALES, EXPONENCIALES Y LOGARÍTMICAS**

Ejercicio 1:

Representa: $y = \frac{16}{x}$, $1 \leq x \leq 16$



Ejercicio 2:

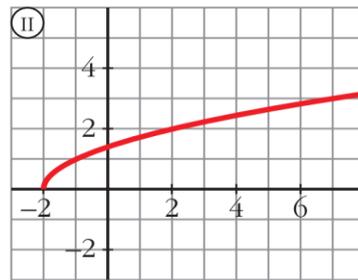
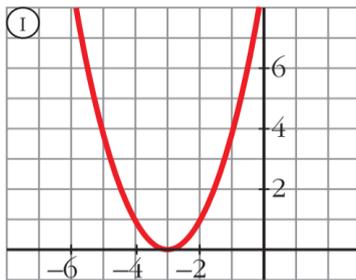
Asocia a cada una de las gráficas una de las siguientes expresiones analíticas:

a) $y = \frac{1}{x} + 2$

b) $y = \frac{1}{x+3}$

c) $y = (x+3)^2$

d) $y = \sqrt{x+2}$

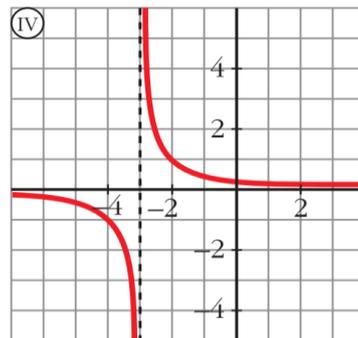
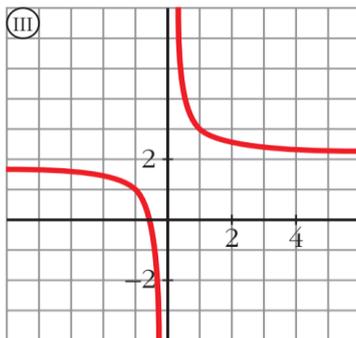


a) → III

b) → IV

c) → I

d) → II



Ejercicio 3:

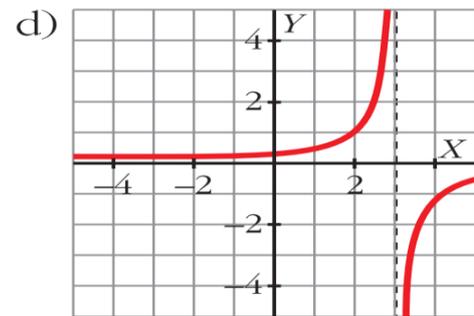
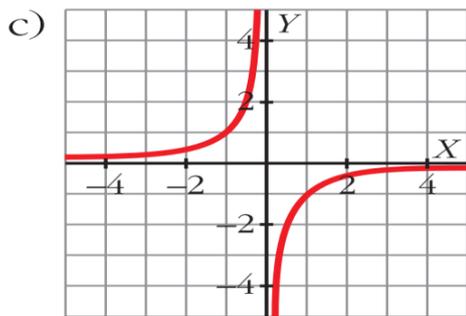
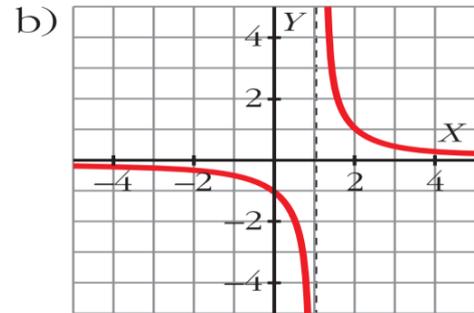
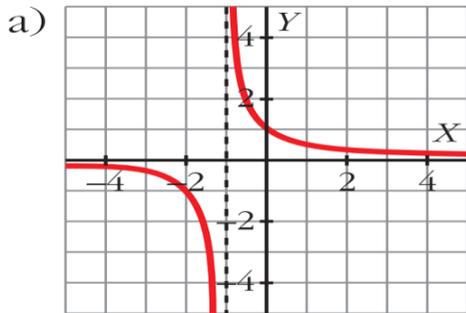
Representa las siguientes funciones:

a) $y = \frac{1}{x+1}$

b) $y = \frac{1}{x-1}$

c) $y = \frac{-1}{x}$

d) $y = \frac{-1}{x-3}$



Ejercicio 4:

Representa,

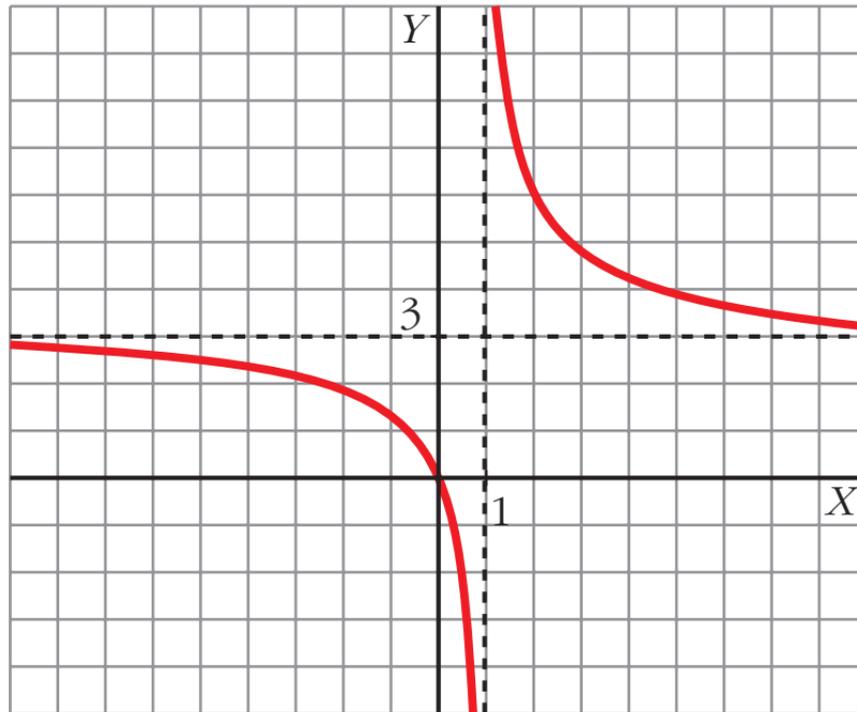
a) $y = \frac{3x}{x-1}$

b) $y = \frac{x-2}{x-4}$

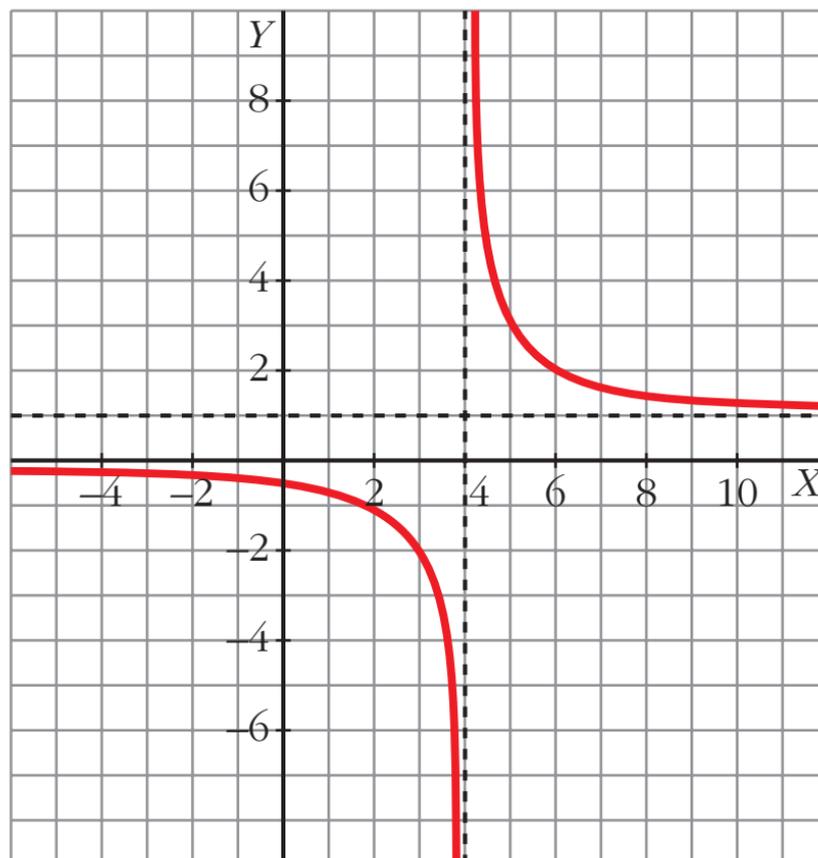
c) $y = \frac{-x-2}{x+3}$

d) $y = \frac{2x-3}{x-1}$

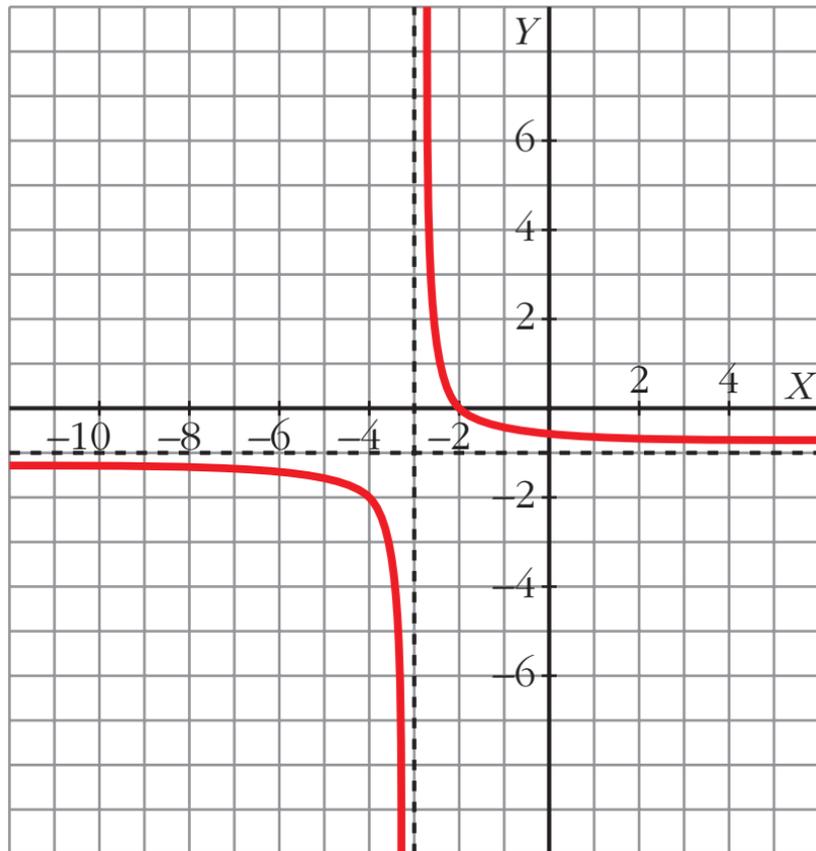
a) $y = \frac{3x}{x-1}$



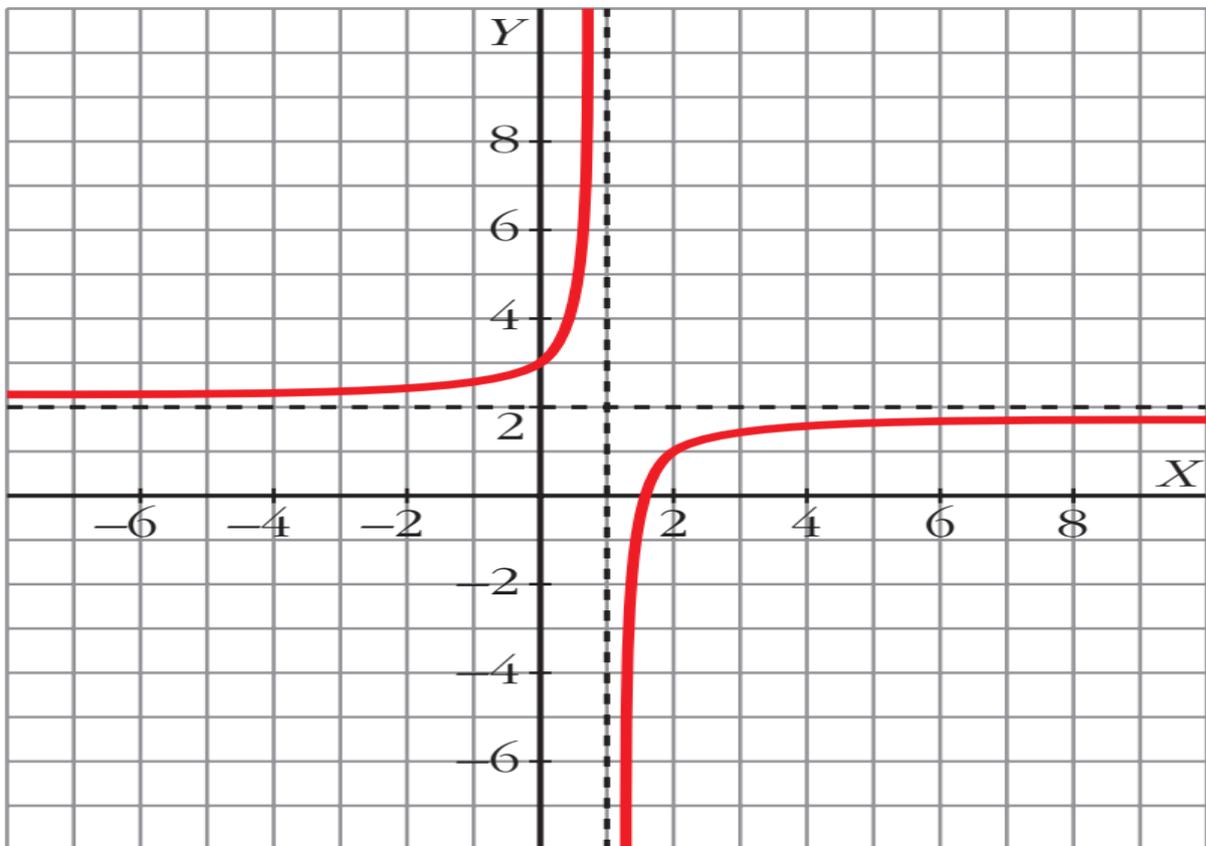
b) $y = \frac{x - 2}{x - 4}$



c) $y = \frac{-x - 2}{x + 3}$



d) $y = \frac{2x - 3}{x - 1}$



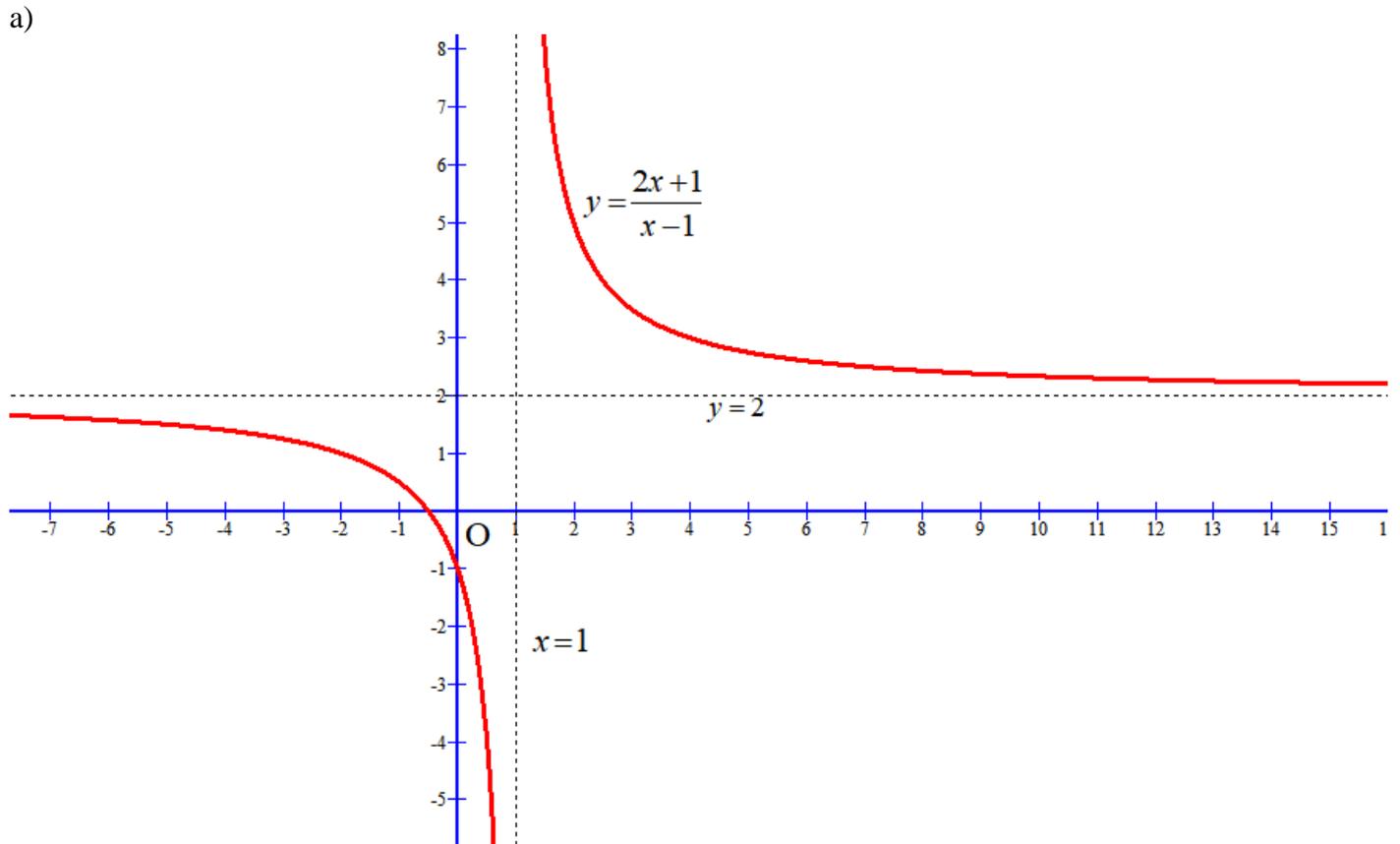
Ejercicio 5: Representa las siguientes funciones del tipo $y = \frac{ax+b}{cx+d}$

a) $y = \frac{2x+1}{x-1}$

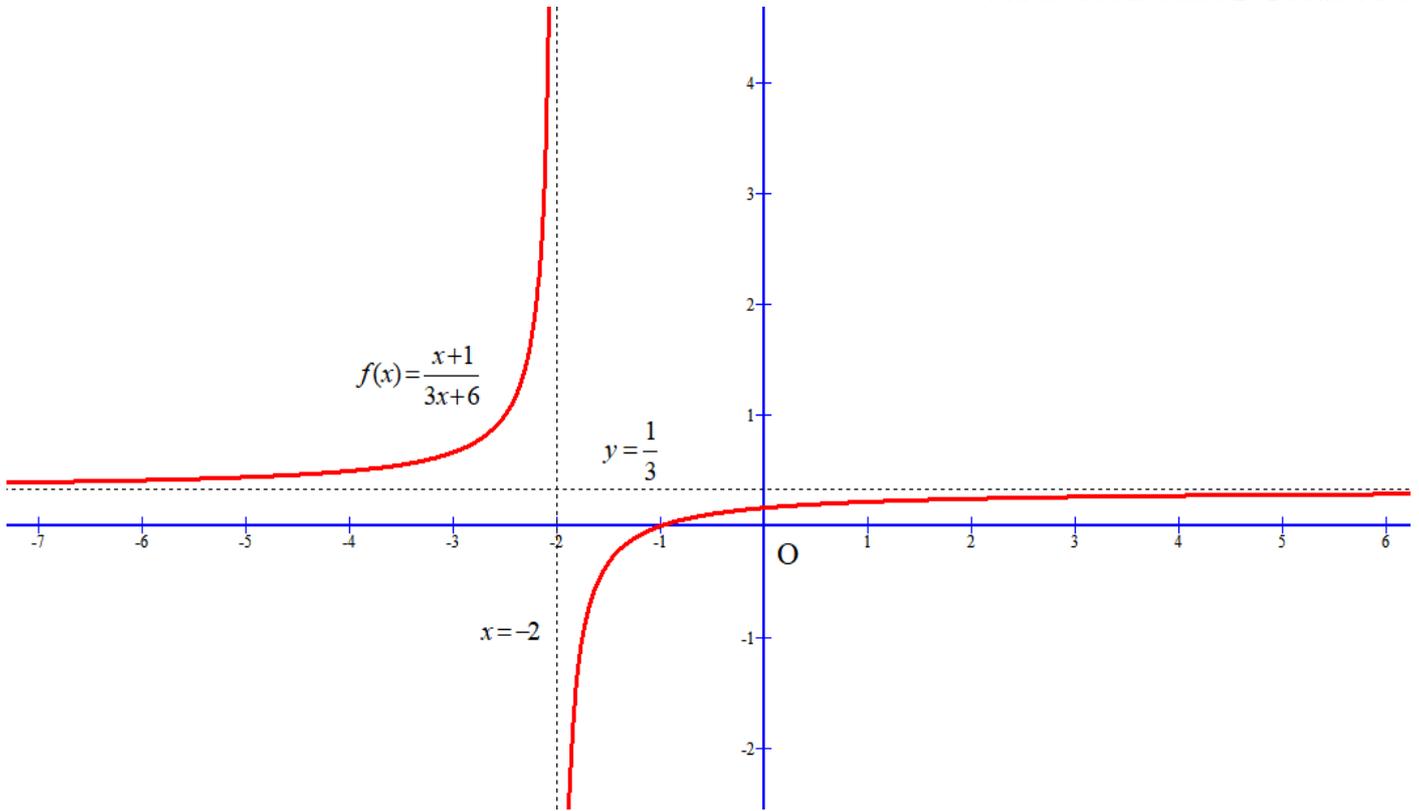
b) $f(x) = \frac{x+1}{3x+6}$

c) $g(x) = \frac{-x}{x-3}$

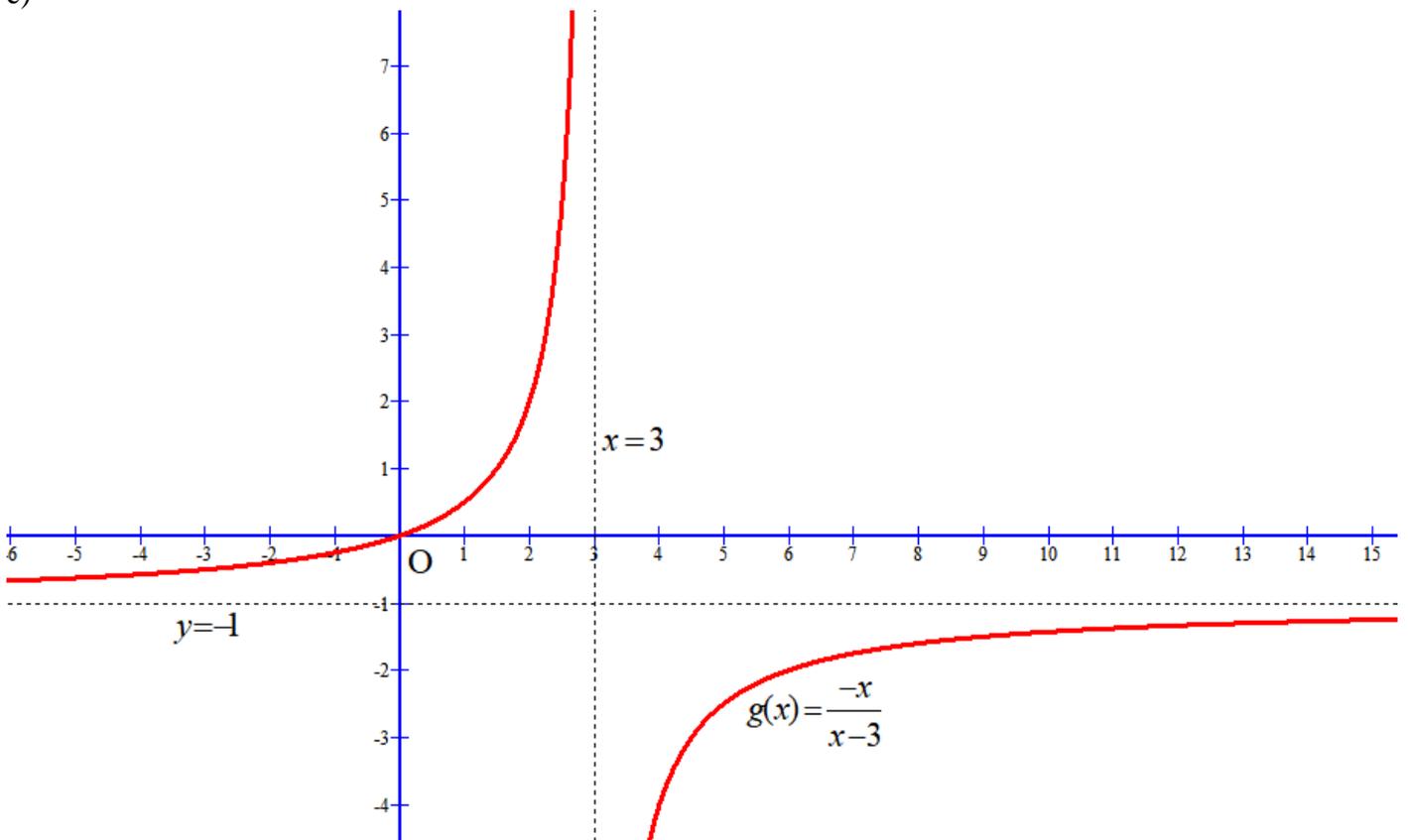
SOLUCIÓN:



b)

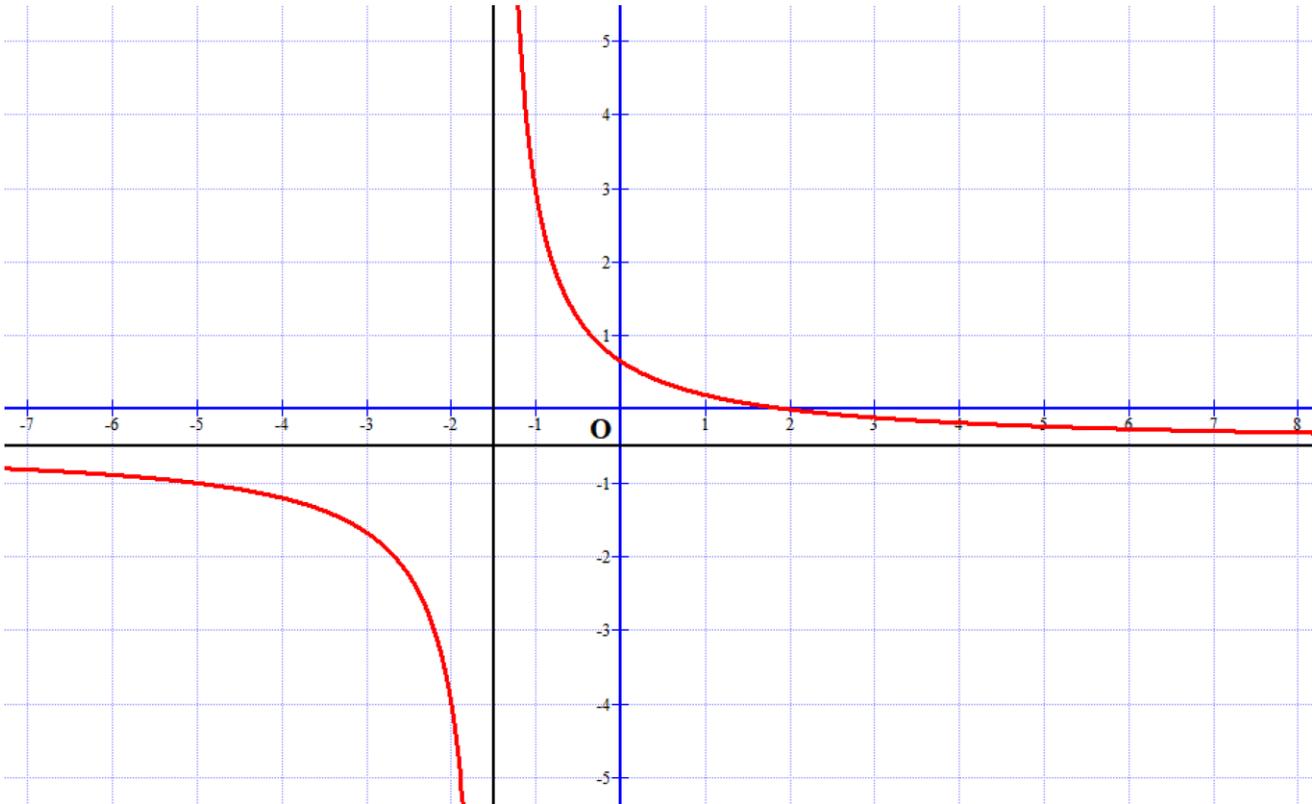


c)

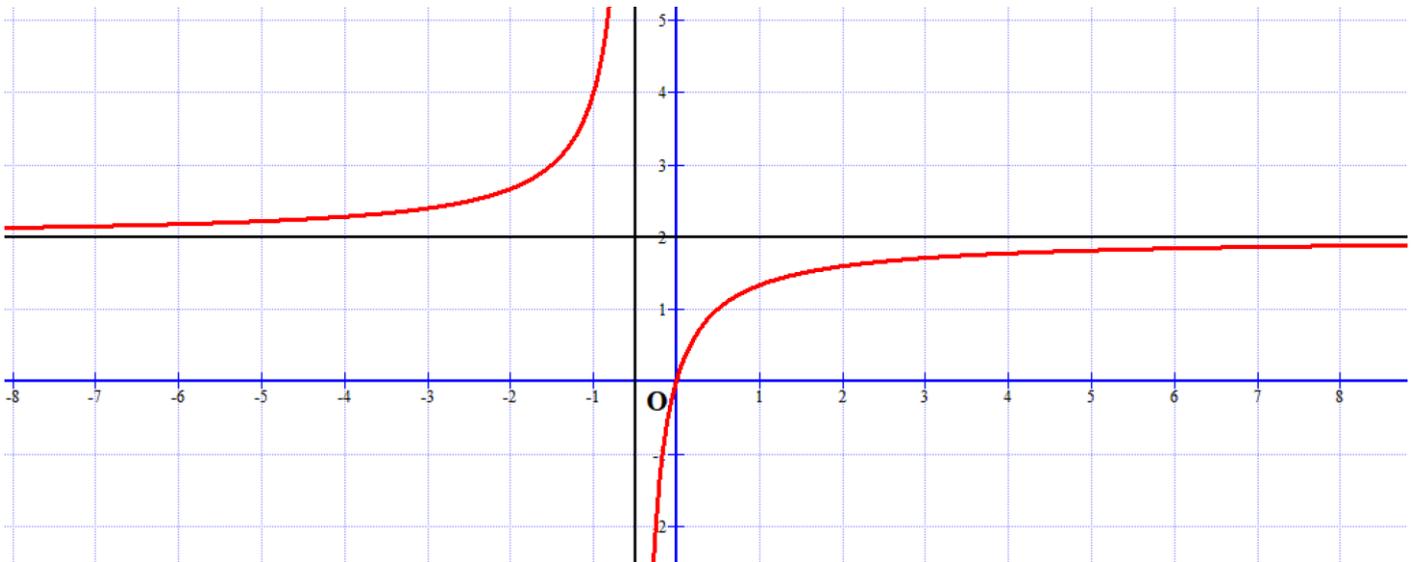


Ejercicio 6: Representa las siguientes funciones:

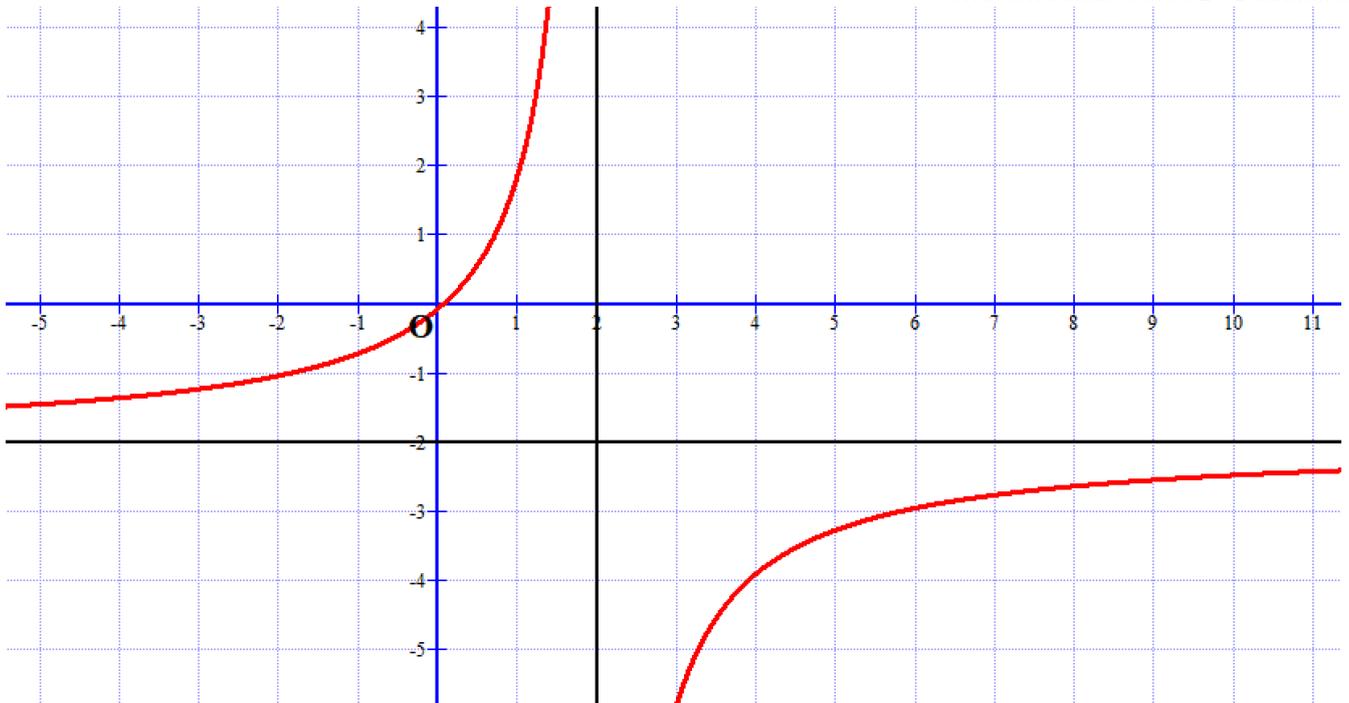
a) $y = \frac{-x+2}{2x+3}$



b) $y = \frac{4x}{2x+1}$



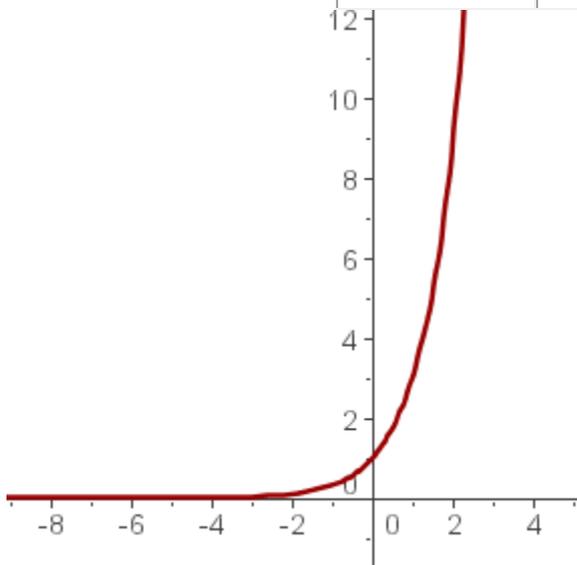
c) $y = \frac{-12x+1}{6x-12}$



Ejercicio 7: Representa las funciones exponenciales:

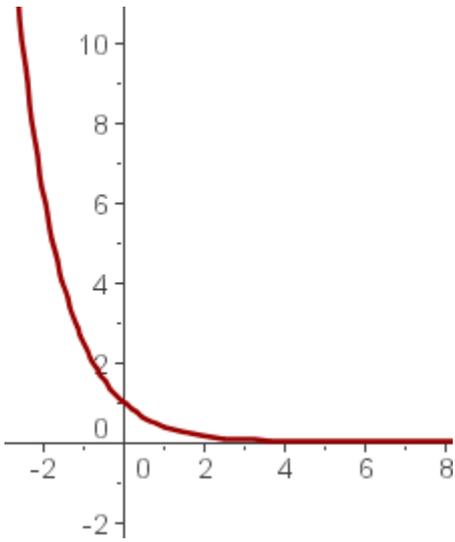
a) $f(x) = 3^x$

x	-3	-2	-1	0	1	2	3
$f(x) = 3^x$	1/27	1/9	1/3	1	3	9	27



b) $f(x) = \left(\frac{2}{5}\right)^x$

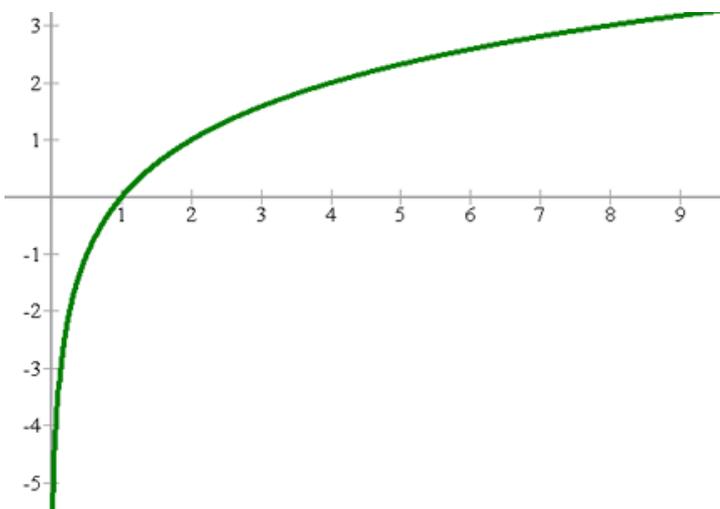
x	-3	-2	-1	0	1	2	3
$f(x) = \left(\frac{2}{5}\right)^x$	15.625	6.25	2.5	1	0.4	0.16	0.064



Ejercicio 8: Representa las funciones logarítmicas:

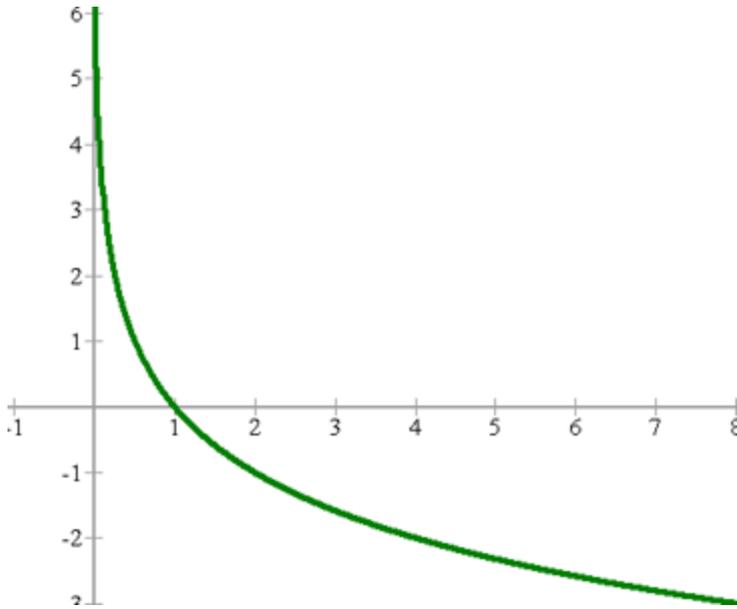
a) $f(x) = \log_2 x$

x	1/8	1/4	1/2	1	2	4	8
f(x)	-3	-2	-1	0	1	2	3



b) $f(x) = \log_{\frac{1}{2}} x$

x	1/8	1/4	1/2	1	2	4	8
f(x)	3	2	1	0	-1	-2	-3



c) $f(x) = \ln x$

x	0.1	0.5	1	2	3	4	5
f(x)	-2.3	-0.7	0	0.7	1.1	1.4	1.6

