

Estudo de funções tipo $f(x)/g(x)$



A) $\frac{(x-1)(x-4)}{(x-2)(x-3)}$

ZEROS

$x=1$ e $x=4$

∞

$x=2$ e $x=3$

2^- $\frac{+-}{--}$ 3^- $\frac{+-}{+-}$

2^+ $\frac{+-}{+-}$ 3^+ $\frac{+-}{++}$

$(2^-, -\infty)$ $(2^+, +\infty)$
 $(3^-, +\infty)$ $(3^+, -\infty)$

B) $\frac{(x-2)(x-3)}{(x-1)(x-4)}$

$B = \frac{1}{A}$

ZEROS

$x=2$ e $x=3$

∞

$x=1$ e $x=4$

1^- $\frac{--}{--}$ 4^- $\frac{++}{+-}$

1^+ $\frac{--}{+-}$ 4^+ $\frac{++}{++}$

$(1^-, +\infty)$ $(1^+, -\infty)$
 $(4^-, -\infty)$ $(4^+, +\infty)$

MÁXIMOS/MÍNIMOS

$\frac{f}{g} \rightarrow f'g - fg' = 0$

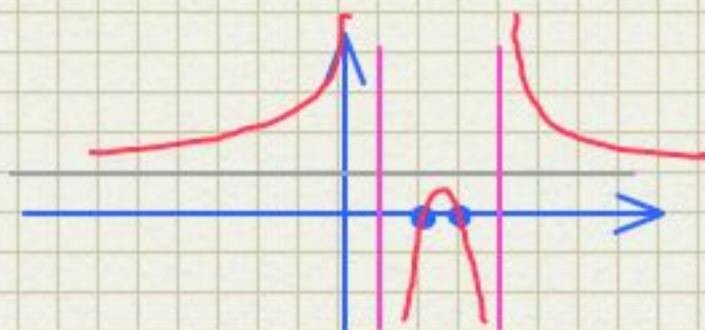
$\frac{g}{f} \rightarrow g'f - fg' = 0$

$(2x-5)(x^2-5x+4) - (2x-5)(x^2-5x+6) = 0$

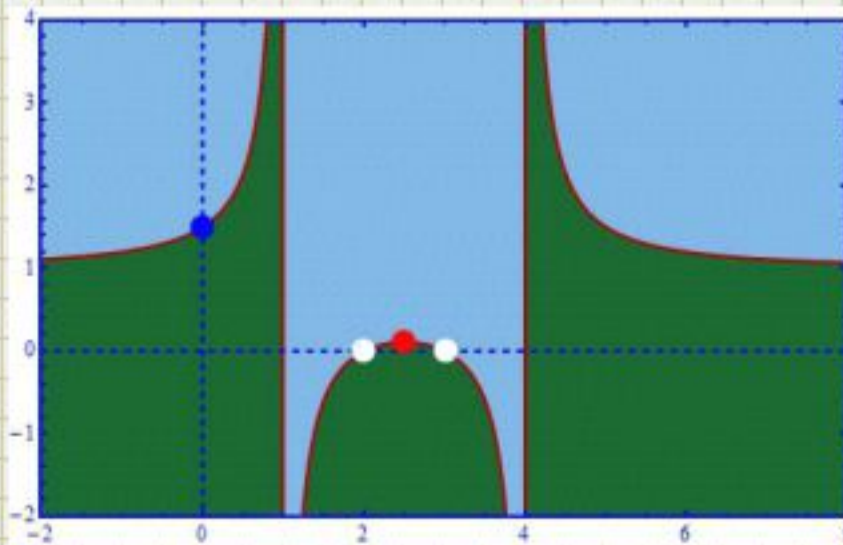
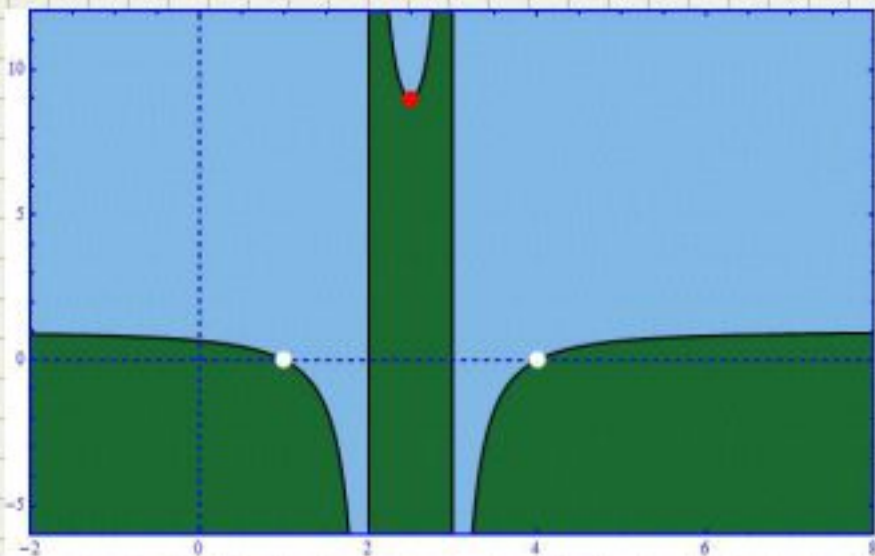
$(\frac{5}{2}, 9)$

$x = 5/2$

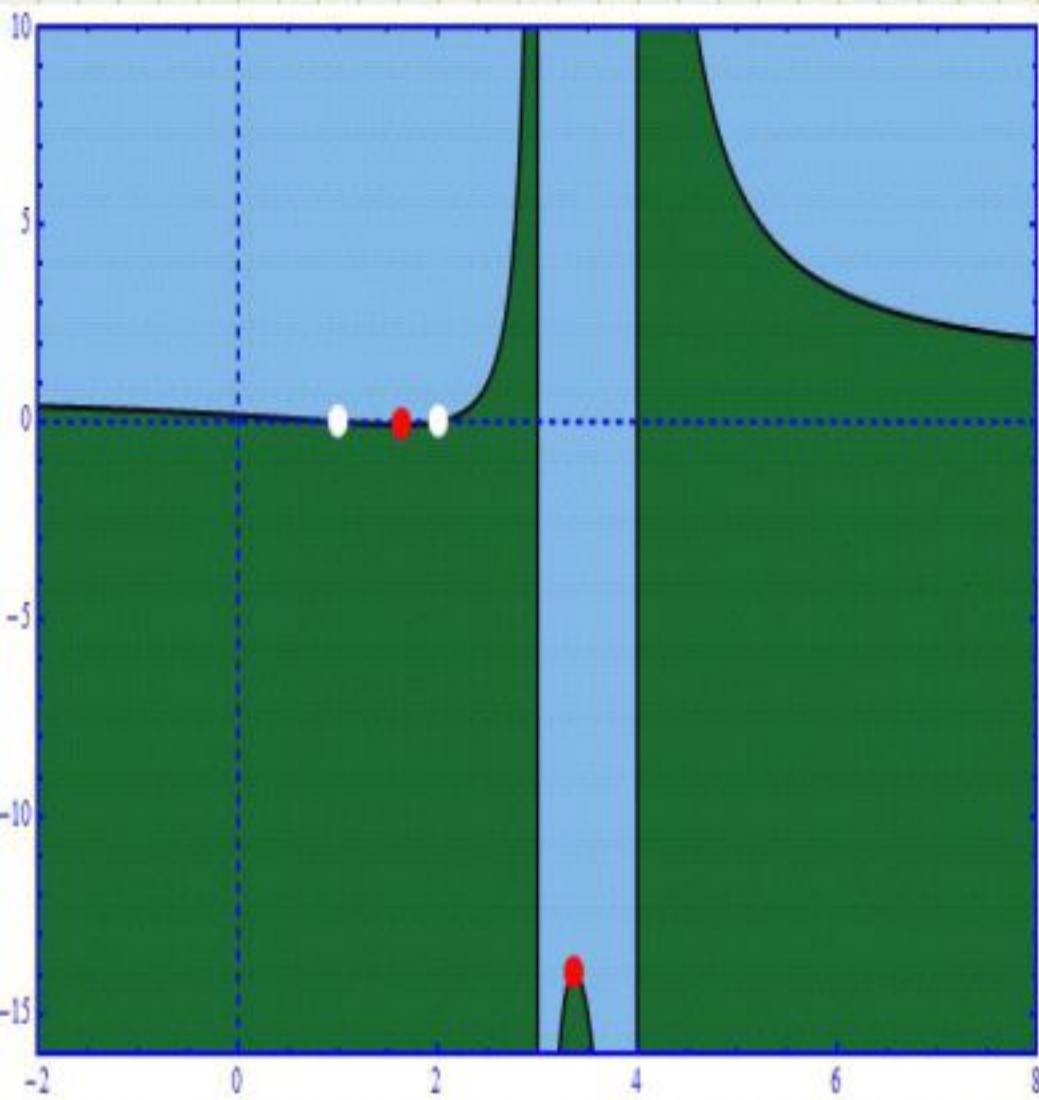
$(\frac{5}{2}, \frac{1}{9})$



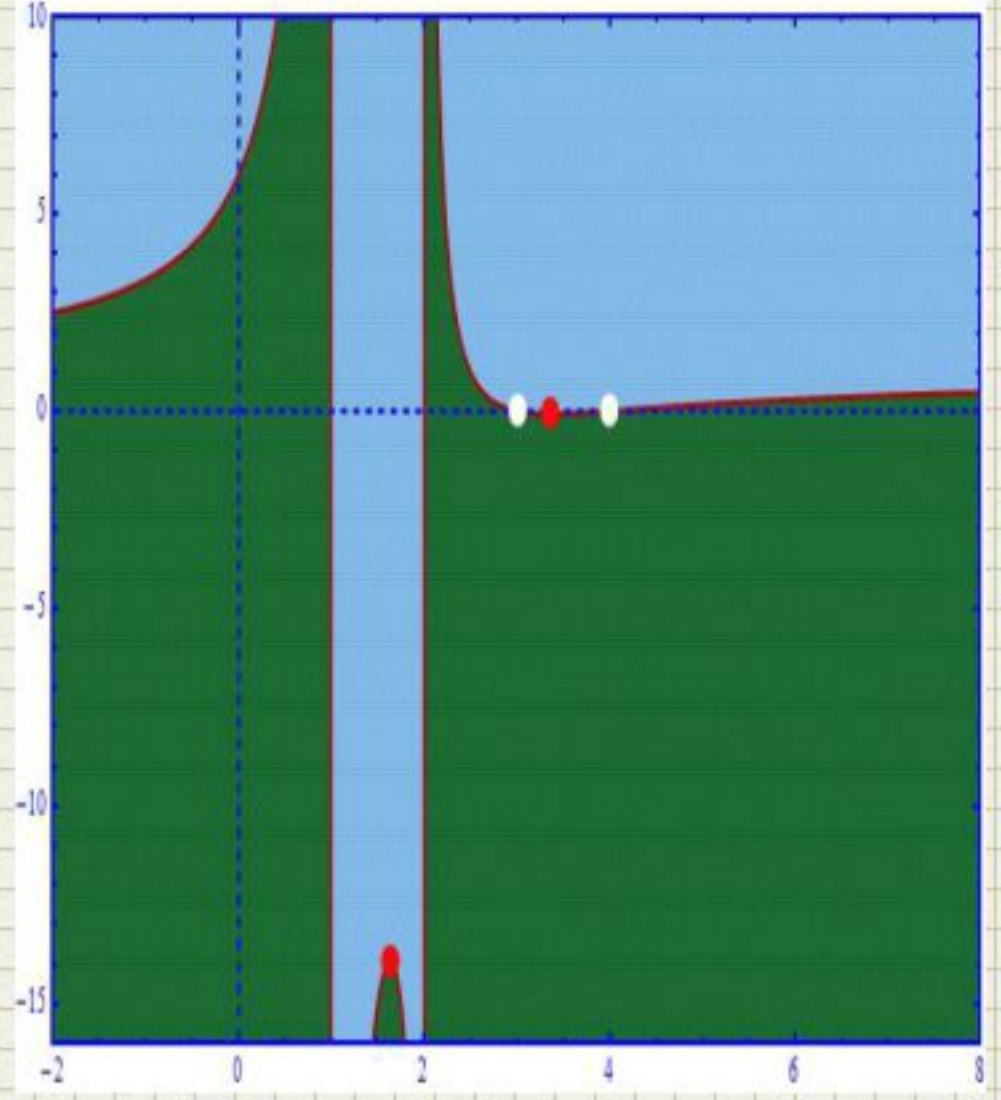
$\lim_{x \rightarrow \pm \infty} \frac{x^2}{x^2} = 1$



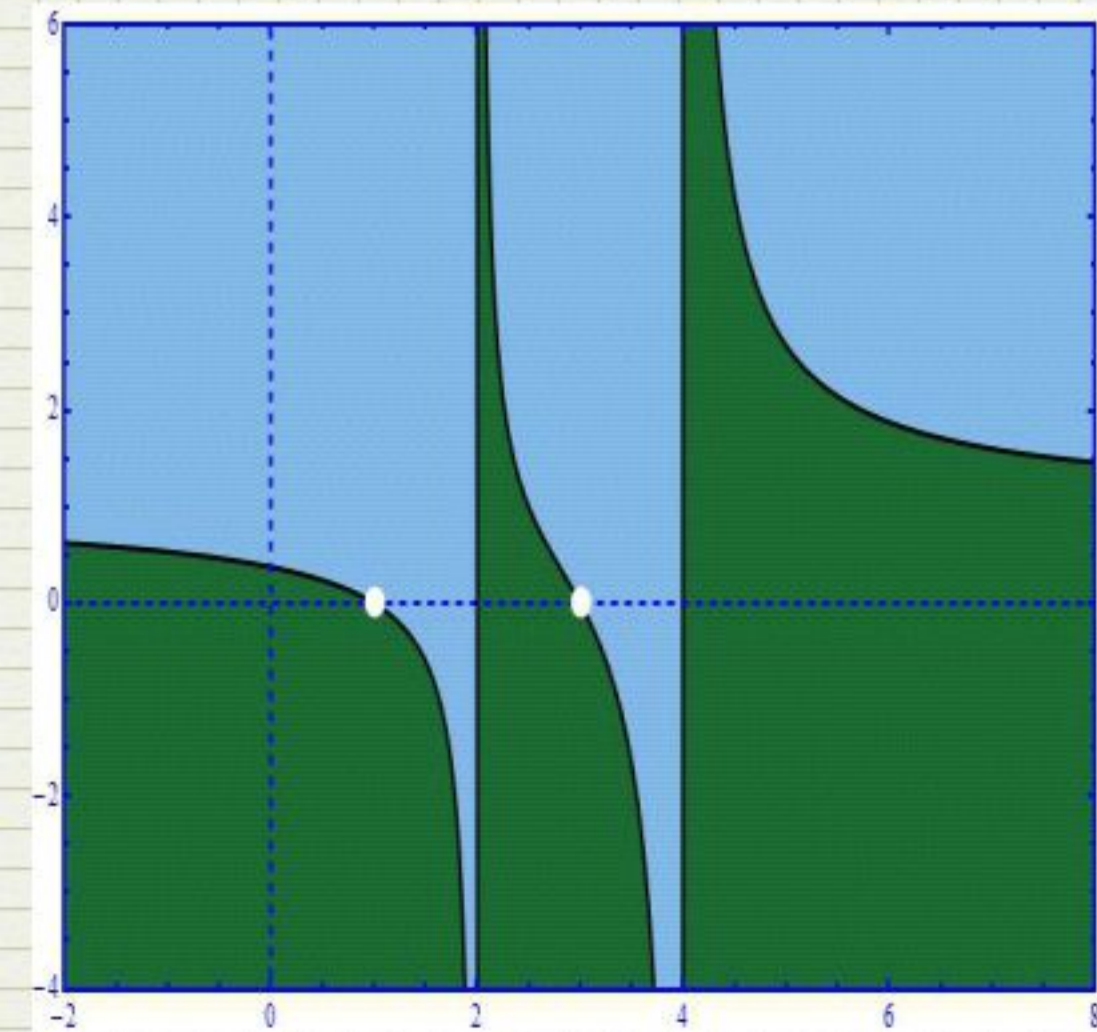
$$\frac{(x-1)(x-2)}{(x-3)(3-4)}$$



$$\frac{(x-3)(x-4)}{(x-1)(x-2)}$$



$$\frac{(x-1)(x-3)}{(x-2)(x-4)}$$



$$\frac{(x-2)(x-4)}{(x-1)(x-3)}$$

