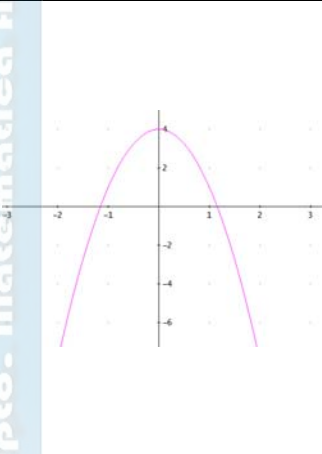
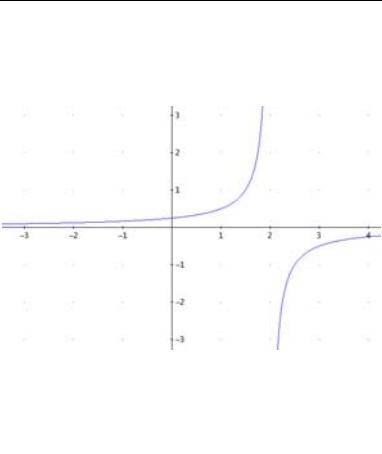
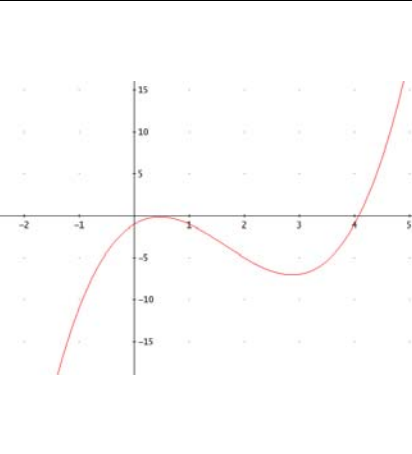
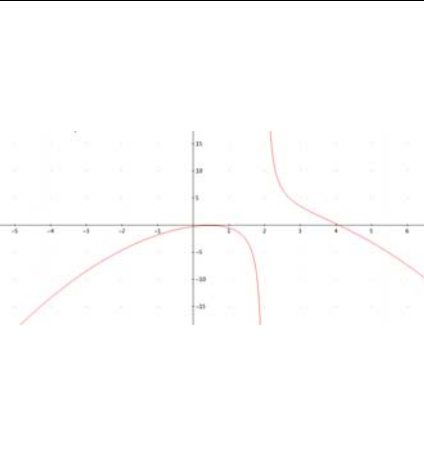
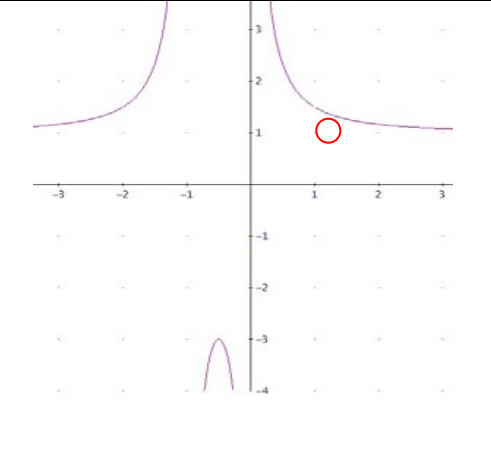


EM- sesión 4 Límites básicos de funciones racionales

Grupo:

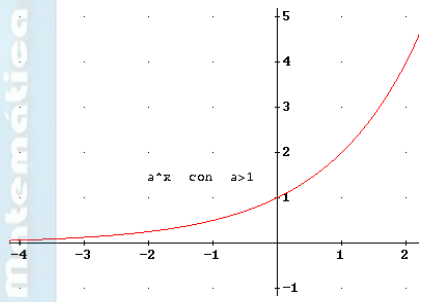
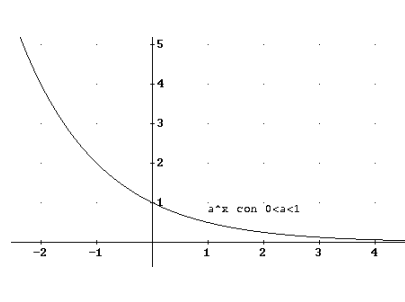
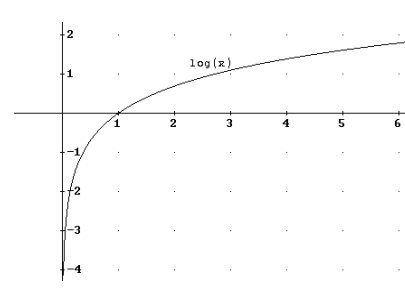
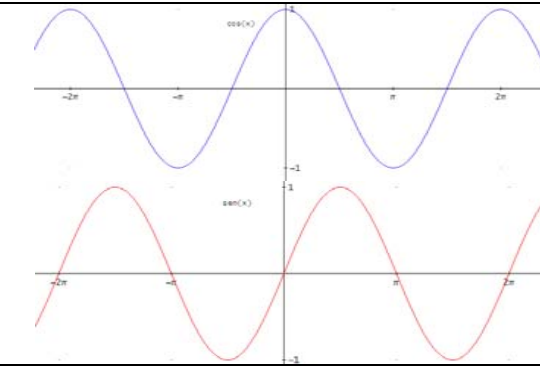
Secretario

$g(x) = 4 - 3x^2$	$h(x) = \frac{1}{4 - 2x}$	$i(x) = x^3 - 5x^2 + 4x - 1$	$j(x) = \frac{x^3 - 5x^2 + 4x - 1}{4 - 2x}$	$i(x) = \frac{x^3 - 1}{x^3 - x}$
				
$\lim_{x \rightarrow -\infty} g(x) =$ $\lim_{x \rightarrow +\infty} g(x) =$ $\lim_{x \rightarrow 0} g(x) =$	$\lim_{x \rightarrow -\infty} h(x) =$ $\lim_{x \rightarrow +\infty} h(x) =$ $\lim_{x \rightarrow 0} h(x) =$ $\lim_{x \rightarrow 2^-} h(x) =$ $\lim_{x \rightarrow 2^+} h(x) =$	$\lim_{x \rightarrow -\infty} i(x) =$ $\lim_{x \rightarrow +\infty} i(x) =$ $\lim_{x \rightarrow 0} i(x) =$	$\lim_{x \rightarrow -\infty} j(x) =$ $\lim_{x \rightarrow +\infty} j(x) =$ $\lim_{x \rightarrow 0} j(x) =$ $\lim_{x \rightarrow 2^-} j(x) =$ $\lim_{x \rightarrow 2^+} j(x) =$	$\lim_{x \rightarrow -\infty} i(x) =$ $\lim_{x \rightarrow +\infty} i(x) =$ $\lim_{x \rightarrow -1} i(x) =$ $\lim_{x \rightarrow 0} i(x) =$ $\lim_{x \rightarrow 1} i(x) =$

Otros límites de funciones racionales e irracionales:

$$\begin{aligned}
 &\lim_{x \rightarrow +\infty} \frac{3x^3 + 1}{2x^2 + x} = & ; & \lim_{x \rightarrow -\infty} \frac{2x^2 + x}{3x^3 + 1} = & ; & \lim_{x \rightarrow 0} \frac{2x^2 + x}{3x^3 + 1} = & ; & \lim_{x \rightarrow 0} \frac{3x^3 + 1}{2x^2 + x} = \\
 &\lim_{x \rightarrow +\infty} \frac{\sqrt{x^4 - x^3}}{\sqrt{3x^3 + 1}} = & ; & \lim_{x \rightarrow 0} \frac{\sqrt{x^4 - x^3}}{\sqrt{3x^3 + 1}} = & ; & \lim_{x \rightarrow +\infty} \frac{\sqrt[3]{x^4 - x^3}}{\sqrt{3x^3 + 1}} = & ; & \lim_{x \rightarrow 1^+} \frac{\sqrt{3x^3 + 1}}{\sqrt[3]{x^4 - x^3}} = \\
 &\lim_{x \rightarrow +\infty} \frac{\sqrt{x^4 + x^2}}{x^2 + x} = & ; & \lim_{x \rightarrow +\infty} \frac{\sqrt{5x^4 + x^2}}{2x^2 + x} = & ; & \lim_{x \rightarrow 0^+} \frac{\sqrt{x^4 + x^2}}{x^2 + x} =
 \end{aligned}$$

Límites de funciones elementales: exponencial, logaritmo, trigonométricas.

2^x o a^x ($a > 1$)	2^{-x} o $(\frac{1}{2})^x$ o a^x ($0 < a < 1$)	$\log_a(x)$ ($a > 1$); $\ln(x) = \log_e(x)$	$\cos(x)$ / $\text{sen}(x)$
 <p style="text-align: center;">a^x con $a > 1$</p>	 <p style="text-align: center;">a^x con $0 < a < 1$</p>	 <p style="text-align: center;">$\log(x)$</p>	
$\lim_{x \rightarrow -\infty} 2^x =$; $\lim_{x \rightarrow 0} 2^x =$; $\lim_{x \rightarrow -1} 2^x =$; $\lim_{x \rightarrow +\infty} 2^x =$ $\lim_{x \rightarrow +\infty} \left(\frac{1}{2}\right)^x =$; $\lim_{x \rightarrow 0} \left(\frac{1}{2}\right)^x =$; $\lim_{x \rightarrow -\infty} \frac{3}{2^x} =$ $\lim_{x \rightarrow +\infty} e^{-x} =$; $\lim_{x \rightarrow +\infty} \frac{e^x}{2^x} =$; $\lim_{x \rightarrow -\infty} \frac{(\sqrt{2})^x}{2^x} =$	$\lim_{x \rightarrow +\infty} \log_2 x =$ $\lim_{x \rightarrow 1} \log_2 x =$ $\lim_{x \rightarrow 0+} \ln x =$ $\lim_{x \rightarrow +\infty} \ln\left(\frac{1}{x}\right) =$ $\lim_{x \rightarrow +\infty} \ln\left(\frac{x+1}{x-1}\right) =$ $\lim_{x \rightarrow +\infty} \ln(2x^2 - x) =$	$\lim_{x \rightarrow +\infty} \text{sen}(x) =$ $\lim_{x \rightarrow -\infty} \cos(x) =$ $\lim_{x \rightarrow 0} \text{sen}(x) =$ $\lim_{x \rightarrow \pi} \cos(x) =$	