Pág 296, 15 c d

c) $\lim_{x\to 0}\dfrac{x^2-2x}{x^3+x^2}=\left(\dfrac{0}{0}\right)=\lim_{x\to 0}\dfrac{x(x-2)}{x^2(x+1)}=\lim_{x\to 0}\dfrac{(x-2)}{x(x+1)}=\dfrac{-2}{0}=\infty$

calculemos el signo del ∞

$$\lim_{x\to 0^-}\frac{(x-2)}{x(x+1)}=[x=-0'1]\frac{-}{-}\infty=+\infty$$

$$\lim_{x\to 0^+}\frac{(x-2)}{x(x+1)}=[x=0'1]\frac{-}{+}\infty=-\infty$$

d) $\lim_{x\to -1}\dfrac{x^3+x^2}{x^2+2x+1}=\left(\dfrac{0}{0}\right)=\lim_{x\to -1}\dfrac{x^2(x+1)}{(x+1)^2}=\lim_{x\to -1}\dfrac{x^2}{(x+1)}=\dfrac{1}{0}=\infty$

	1	2	1
−1		−1	−1
	1	1	0

$\rightarrow \quad x^2+2x+1=(x+1)^2$

calculemos el signo del ∞

$$\lim_{x\to -1^-}\frac{x^2}{(x+1)}=[x=-1'1]\frac{+}{-}\infty=-\infty$$

$$\lim_{x\to -1^+}\frac{x^2}{(x+1)}=[x=-0'9]\frac{+}{+}\infty=+\infty$$

$\lim_{x\to 1}\left(\dfrac{x^2-2x}{x^3+x^2}\right)^{2-5x}=\left(\dfrac{-1}{2}\right)^{-3}=-8$ | $\lim_{x\to -1}\left(\dfrac{3x+4}{x^2+1}\right)^{2-5x}=\left(\dfrac{1}{2}\right)^{7}=\dfrac{1}{128}$

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a) $\lim_{x\to 1}\left(\dfrac{7-5x}{x^2+1}\right)^{2-5x}=\left(\dfrac{2}{2}\right)^{-3}=1$

$$\lim_{x\to 2}\log_2\left(\frac{3x+4}{x^2+1}\right)^5=\log_2\left(\frac{10}{5}\right)^5=\log_2(2)^5=5$$