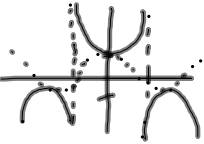


49) $\lim_{x \rightarrow 0} \frac{x}{x^2 - x} = \frac{x}{x(x-1)} = \frac{1}{x-1} = -1$

55) $\lim_{x \rightarrow 4} \frac{(\sqrt{x+5} - 3)(\sqrt{x+5} + 3)}{(x-4)(\sqrt{x+5} + 3)} = \frac{\sqrt{x+5} - 3}{x-4} = \frac{1}{6}$

31) $\lim_{x \rightarrow 0} \sec 2x = 1$



41) $g(x) = \frac{x^2 - x}{x}$

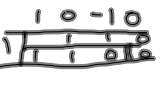
a) $\lim_{x \rightarrow 0} g(x) = -1$

b) $\lim_{x \rightarrow -1} g(x) = -2$

43) $g(x) = \frac{x^3 - x}{x - 1}$

a) $\lim_{x \rightarrow 1} g(x) = 2$

b) $\lim_{x \rightarrow -1} g(x) = 0$



63) $\lim_{\Delta x \rightarrow 0} \frac{[(x+\Delta x)^2 - 2(x+\Delta x) + 1] - [x^2 - 2x + 1]}{\Delta x}$

$\lim_{\Delta x \rightarrow 0} \frac{x^2 + 2x\Delta x + \Delta x^2 - 2x - 2\Delta x + 1 - x^2 + 2x - 1}{\Delta x}$

$\lim_{\Delta x \rightarrow 0} \frac{2x\Delta x + \Delta x^2 - 2\Delta x}{\Delta x} = 2x + \Delta x - 2$

$2x - 2$