**24.** $f(x) = \begin{cases} \dfrac{x^2 + x}{x + 1} & \text{if } x \neq -1 \\ 2 & \text{if } x = -1 \end{cases}$ ; $a = -1$

1) $f(-1)$

2) $\lim_{x \to -1} f(x)$

3) $f(-1) = \lim_{x \to -1} f(x)$

1) $f(-1) = 2$

2) $\lim_{x \to -1} \left(\frac{x^2+x}{x+1}\right) = \lim_{x \to -1} \left(\frac{x(x+1)}{x+1}\right) = \lim_{x \to -1} (x) \overset{DSP}{=} -1$

$x \neq -1$

3) $f(-1) = \lim_{x \to -1} f(x)$ $\Big\}$ $2 \neq -1$

$f(x)$ IS NOT cont. at $x = -1$