Limits: Numerically, Analytically, and Graphically

1. If $f(x) = \frac{\sqrt{x+8}-2}{x+4}$, find $\lim\limits_{x\to-4} f(x)$ numerically.

x							
$f(x)$							

2. Find $\lim\limits_{x\to-4} \frac{\sqrt{x+8}-2}{x+4}$ analytically (algebraically).

3. If $f(x) = \begin{cases} 1-x & x < -4 \\ 5 & x = -4 \\ \sqrt{x^2+9} & x > -4 \end{cases}$, find $\lim\limits_{x\to-4} f(x)$ graphically.