Provide a clear and organized presentation. Show all of your work. Evaluate each of the following limits, if they exist. If they do not, state such.

1. $\lim _{x \rightarrow 3} \frac{x^{2}-12}{(x-3)^{2}}$
2. $\lim _{x \rightarrow 0} \frac{(x+2)^{4}-16}{x}$
