

Compute the following limits (think about the *theorems* you use).

$$\begin{array}{lll} a) \lim_{x \rightarrow 1} \frac{x^3 - 1}{(x - 1)^2} & b) \lim_{x \rightarrow -2} \frac{x^3 + 8}{x + 2} & c) \lim_{x \rightarrow 1} \frac{x^3 - 2x^2 + 2x - 1}{x^3 - 1} \\ d) \lim_{x \rightarrow 8} \frac{\sqrt[3]{x} - 2}{x - 8} & e) \lim_{x \rightarrow -1} \frac{\frac{1}{x} + 1}{x + 1} & f) \lim_{x \rightarrow a} \frac{x^n - a^n}{x - a} \\ g) \lim_{x \rightarrow 2} \frac{\sqrt{2} - \sqrt{x}}{2 - x} & h) \lim_{x \rightarrow 0} \frac{1 - \sqrt{1 - x^2}}{x^2} & i) \lim_{x \rightarrow 4} \frac{\sqrt[3]{x} - \sqrt[3]{4}}{x - 4} \end{array}$$