TeX code compiled with \documentclass{beamer} using the Amsterdam theme.

\begin{document} \begin{frame} If $f(x) = \dfrac{x^2 - 4}{x - 2}$ and $g(x) = x + 2$, then we can say the functions f and g are equal. \end{frame} \begin{frame} \Large $$\dlim_{x\to 2} f(x) = 4 \hskip 10pt \dlim_{x\to 2} g(x) = -2 \hskip 10pt \dlim_{x\to 2} h(x) = 0$$ Find the limits, if they exist: \begin{columns} \begin{column}{0.5\textwidth} \begin{enumerate} \item[\bf (a)] $\displaystyle\lim_{x\to 2 }[f(x) + 5g(x)]$ \vskip 30pt \item[\bf (b)] $\displaystyle\lim_{x\to 2 }[g(x)]^3$ \vskip 30pt \item[\bf (c)] $\displaystyle\lim_{x\to 2 }\dfrac{1}{f(x)}$ \end{enumerate} \end{column} \begin{column}{0.5\textwidth} \begin{enumerate} \item[\bf (d)] $\displaystyle\lim_{x\to 2 } 4f(x)g(x)$ \vskip 30pt \item[\bf (e)] $\displaystyle\lim_{x\to 2 } \dfrac{g(x)}{h(x)}$ \vskip 30pt \item[\bf (f)] $\displaystyle\lim_{x\to 2 } \dfrac{g(x)h(x)}{f(x)}$ \end{enumerate} \end{column} \end{columns} \end{frame} \begin{frame} \LARGE \begin{columns} \begin{column}{0.5\textwidth} $$\displaystyle\lim_{x \to 1} \frac{x^2 -4x + 3}{x -1}$$ \vskip 20pt $$\displaystyle\lim_{x \to -1} \frac{x^2 -4x }{x^2-3x-4}$$ \vskip 20pt $$\displaystyle\lim_{h \to 0} \dfrac{(-4+h)^2-16 }{h}$$ \end{column} \begin{column}{0.5\textwidth} $$\displaystyle\lim_{ h \to 0} \dfrac{\sqrt{9 + h}-3}{h}$$ \vskip 20pt $$\displaystyle\lim_{x \to -4 } \dfrac{1/4+1/x }{4+x}$$ \vskip 20pt $$\displaystyle\lim_{x \to 0} \dfrac{9 }{t}- \frac{9 }{t^2+t}$$ \end{column} \end{columns} \end{frame} \begin{frame} \begin{block}{}\begin{center}\LARGE \textbf{True} or \textbf{False}. \end{center}\end{block} \vskip 30pt \Large Consider a function $f(x)$ with the property that $\displaystyle{\lim_{x\rightarrow a} f(x) =0}$. Now consider another function $g(x)$ also defined near a. Then $$\displaystyle{\lim_{x\rightarrow a} [f(x)g(x)] = 0}$$ \end{frame} \begin{frame} \begin{block}{}\begin{center}\LARGE \textbf{True} or \textbf{False}. \end{center}\end{block} \vskip 30pt \Large If $\displaystyle{\lim_{x\rightarrow a} f(x) =\infty}$ and $\displaystyle{\lim_{x\rightarrow a} g(x) =\infty}$, then $$\displaystyle{\lim_{x\rightarrow a} [f(x)-g(x)] =0}$$ \end{frame} \begin{frame} \Large Find the following limits. $$\displaystyle\lim_{x\to 3} 8x+|x-3|$$ \vskip 15pt $$\displaystyle\lim_{x\to -3} \frac{4x+12}{|x+3|}$$ \vskip 15pt If $$2x -2 \leq f(x) \leq x^2 -2x + 2$$ for $x \geq 0$, find $\displaystyle\lim_{ x\to 2} f(x)$. \end{frame} \begin{frame} Consider the function \[f(x)=\left\{\begin{array}{ll} x^2 & \mbox{x is rational, $x\neq 0$} \\ -x^2 & \mbox{x is irrational} \\ \mbox{undefined} & x=0 \end{array}\right.\] Then \begin{enumerate} \item there is no a for which $\displaystyle{\lim_{x\rightarrow a}f(x)}$ exists \item there may be some a for which $\displaystyle{\lim_{x\rightarrow a}f(x)}$ exists, but it is impossible to say without more information \item $\displaystyle{\lim_{x\rightarrow a}f(x)}$ exists only when $a=0$ \item $\displaystyle{\lim_{x\rightarrow a}f(x)}$ exists for infinitely many a \end{enumerate} \end{frame} \end{document}