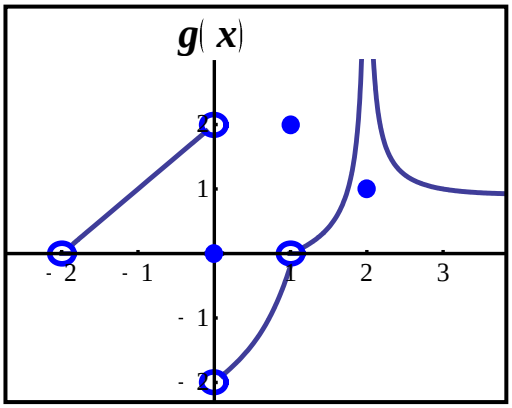
King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 151 Math 101 (14) Quiz#1 (2.2, and 2.3)
Family name: S.r#

$$f(x)=\begin{cases} [\![-x]\!], & \text{if } x<-1 \\ 4\ , & \text{if } x=-1 \\ \dfrac{1}{x^2-1}, & \text{if } -1<x<0 \\ x-5\ , & \text{if } 0<x \end{cases}$$

Where $[\![y]\!]$ is the greatest integer less than or equal to *y*.



Use $f(x)$ and the graph of $g(x)$ to evaluate each limit if it is exist and explain if it is not.

i. $\lim_{x\to 1} g(x)$

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ii. $\lim_{x\to 2} g(x)$

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iii. $\lim_{x\to -2^+} f(x)$

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iv. $\lim_{x\to -1^+} f(x)$

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v. $\lim_{x\to 0}\big(f(x)-g(x)\big)$