King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 132 Math 101 (08) Quiz#2 (2.4 & 2.5)
Family Name: S.r#

Q1. Evaluate

i. $\lim_{x \to 2} \frac{sin(\pi x)}{x}$

ii. $\lim_{x \to 1^-} \left\lfloor \frac{6}{x+2} \right\rfloor$

Q2. for $f(x) = \begin{cases} \frac{x}{b} & , x \le -1 \\ -b^2 x & , x > -1 \end{cases}$ Find the value(s) of b that makes $f(x)$ continuous at $x = -1$.

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Term 132 Math 101 (14) Quiz#2 (2.4 & 2.5)
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Q1. Evaluate

i. $\lim_{x \to 1} \dfrac{sin(x^2 - 1)}{x - 1}$

ii. $\lim_{x \to \frac{1}{3}^+} \lfloor 4 - 3x \rfloor$

Q2. Use the Intermediate Value Theorem to show that $f(x) = x^3 - 6$ has a root on $[-1, 2]$