King **F**ahd **U**niversity for **P**etroleum and **M**inerals
Department of Mathematics & Statistics
Term 162 Quiz#1 (2.2 & 2.3) Math 101 (11)

Full Name: ID# **Ser#**

Q1. **Use limits** to determine whether or not $x = 0$ is a vertical asymptote of $(x) = \frac{x^2+x}{x^3-3x^2}$.

Q2. Evaluate $\lim_{x\to-\sqrt{2}} \left[\!\left[\frac{1}{3-x^2}\right]\!\right]$ if it is exist and **explain if it is not**. (where $[\![x]\!]$ is the greatest integer $\leq x$)

Form A

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Q1. **Use limits** to determine whether or not $x = 1$ is a vertical asymptote of $(x) = \frac{x^2-2x+1}{2x^2+2x-4}$.

Q2. Evaluate $\lim_{x\to 0} \frac{x}{3-\sqrt{9+x}}$ if it is exist and **explain if it is not**.