UNIVERSITY OF PITTSBURGH

Summer Term 6W2 2019
Business Calculus
QUIZ I 30 Points

Name:_____

Show all your work!! Partial credit will only be given for answers which are partially correct!. Be sure to include all necessary symbols. Your grade is based on the work you show and the arguments you make. **No graphing calculators. No cellphones or any other electronic device during the evaluation**.

1. (5 Pts) Find the equation of the line that passes through the point (-2,4) and its perpendicular to the line $-3y = -2x + 7$

2. (15 Pts) True or False. If true, just write TRUE. In case the statement is false, write FALSE and provide a justification to your assertion.

   Consider the functions $f(x) = \dfrac{x^2 - 4}{x + 2}$ and $g(x) = x - 2$. Then:

   (a) $f(x) = g(x)$

   (b) $\dfrac{f(g(x))}{x} = \dfrac{x + 4}{x + 2}$

(c) $\ln(f(x)) - \ln(g(x)) = 1$

3. (10 Pts) Evaluate the limits.

(a) $\lim_{x \to 1/2} \dfrac{2x^2 - 7x + 3}{2x^2 - x}$

(b) $\lim_{x \to 3} \dfrac{x - 3}{\sqrt{x} - \sqrt{3}}$