

Quiz 2 (Group) for Mathematics 223
Introductory Analysis I - Spring 1999
Material Covered: Sections 2.1,2.2 of text and notes
For: 12th February

This is a 15 minute quiz, worth 6% and marked out of 6 points. The total possible points awarded for each question is given in square brackets at the beginning of each question. Anything that can fit on one side of an $8\frac{1}{2}$ by 11 inch piece of paper may be used as a reference during this quiz. A calculator may also be used. No other aids are permitted. Although this is a group quiz, only *one* answer set is handed in for each group. The names of all members of the group *who contributed to this quiz* should appear on the cover sheet of the quiz.

Name 1 (please print): _____
last first

Name 2 (please print): _____
last first

Name 3 (please print): _____
last first

Name 4 (please print): _____
last first

1. If $\lim_{x \rightarrow 3} f(x) = -3$ and $\lim_{x \rightarrow 3} g(x) = 2$, find the following limits.

(a) [2] $\lim_{x \rightarrow 3} [g(x) - 2x - 2]^5 =$

(b) [2] $\lim_{x \rightarrow 3} \left[\frac{f(x)+x^2}{3g(x)+1} \right]^4 =$

(c) [2] $\lim_{x \rightarrow 3} \sqrt{x^2 + 10 - 4f(x)} =$

1. If $\lim_{x \rightarrow 3} f(x) = -3$ and $\lim_{x \rightarrow 3} g(x) = 2$, find the following limits.

(a) [2] $\lim_{x \rightarrow 3} [g(x) - 2x - 2]^5 = [2 - 2(3) - 2]^5 = -7776$

(b) [2] $\lim_{x \rightarrow 3} \left[\frac{f(x) + x^2}{3g(x) + 1} \right]^4 = \left[\frac{-3 + 3^2}{3(2) + 1} \right]^4 \approx 0.5398$

(c) [2] $\lim_{x \rightarrow 3} \sqrt{x^2 + 10 - 4f(x)} = \sqrt{3^2 + 10 - 4(-3)} \approx 5.568$