

QUIZ #8

Math 142

Name: _____

SHOW ALL WORK. Any solution that is not accompanied by the appropriate work necessary for solving the problem will receive no credit. Do not use your calculator to evaluate any limits, derivatives, or integrals. If you need more space, you may use the back of the page.

1. For each of the following series:

- determine whether the series is geometric or not,
- if the series is geometric, determine whether it converges or diverges,
- if it converges, determine its limit.

(a) $.5 + .3 + .18 + .108 + .0648 + \dots$

(b) $2 + 1 + \frac{2}{3} + \frac{1}{2} + \frac{2}{5} + \dots$

2. Express the number $5.2\overline{94} = 5.2949494\dots$ as a ratio of integers (ie. as a fraction).