Math 163 — Quiz 07

Monday November 12th 2012

Instructions Remember to show all your work so you can get partial credit. This quiz is to be done
without a calculator.

1. (20 Points) State and derive the formula for the finite geometric sum:

$$\sum_{n=0}^{N} r^n.$$

2. (10 Points) Evaluate the series
$$\sum_{n=1}^{\infty} \frac{1}{2^n}.$$

3. (10 Points) Does the series
$$\sum_{n=1}^{\infty} \frac{1}{n^{1/2}}$$
converge or diverge? Why?