# Math 2260 Quiz 14

Name _____

*Points will be deducted for untidy or disorganized answers*

1. (4 points) Determine whether the *geometric series* is convergent or divergent. If it is convergent, find its sum.

    (a) $4 + \frac{8}{5} + \frac{16}{25} + \frac{32}{125} + \cdots$

    (b) $\frac{2}{3} - \frac{2}{9} + \frac{2}{27} - \frac{2}{81} + \cdots$

    (c) $\sum_{n=1}^{\infty} \frac{7}{4^n}$

    (d) $\sum_{n=1}^{\infty} 3^{-n} 8^{n+1}$

2. (1 point) Write out the first few terms of the following series to show how the series starts. Then find the sum of the series.

$$\sum_{n=0}^{\infty} \frac{(-1)^n}{5^n}$$