

Name _____

Homework 12
section 9.2

- (5) Compute the exact sum of the geometric series $200 + 20 + 2 + 0.2 + 0.02 + 0.002 + \dots$
- (5) Is the sequence $12 + 4\sqrt{2}, 4 + 6\sqrt{2}, 6 + 2\sqrt{2}, 2 + 3\sqrt{2}, 3 + \sqrt{2}, \dots$ geometric? If so, determine the common ratio and the exact sum of the series. Your answer for the sum of the series should be simplified (i.e. don't leave it as a fraction).

3. (5) Find the exact sum of $\sum_{n=0}^{\infty} \frac{4+6^n}{8^n}$.

4. (5) Is the sum $\sum_{n=1}^{22} (-2)^n$ finite or infinite? Explain. If it is finite, also compute the sum (using an appropriate formula).