**Series Worksheet 1**

1. Consider the series
2. What is
3. What is
4. Find and simplify
5. Is the sequence increasing or decreasing? Convergent?
6. Find the 3-rd partial sum (perhaps with a calculator)
7. Find the 4-th and 5-th partial sum (perhaps with a calculator). Guess at the limit.
8. What is a “geometric series”? Give 3 examples, some convergent, some divergent.
9. Write out the first terms of the series:

Which one is a geometric series? Which one converges/diverges? To what limit?

1. Convert to series notation :

Which one is a geometric series? Which one converges/diverges? To what limit?