**3E Geometric Sum to Infinity**

1. For the following series:

$$16+8+4+2…$$

1. Find the sum of the first 10 terms
2. Find the sum to infinity
3. The fourth term of a geometric series is 1.08 and the seventh is 0.23328.
4. Show that the series is convergent
5. Calculate the sum to infinity of the series
6. For a geometric series with first term $a$, and common ratio $r$, $S\_{4}=15$ and $S\_{\infty }=16$.
7. Find the possible values of $r$
8. Given that all terms in the series are positive, find the value of $a$