

Quiz–Series

Determine if the series

$$\sum_{n=0}^{\infty} 3^{-n} (2^n - 2^{-n})$$

is convergent or divergent. If it is convergent, compute its value.

Show all work and clearly mark your final answer. No calculators/notes allowed. Partial credit will be given for correctly explaining any steps you're unable to carry out, as well as demonstrating correct methods with computational errors.