

3) (10 pts) ANL (Summations)

Using the fact that if $x \neq 1$, then $\sum_{i=0}^n x^i = \frac{x^{n+1}-1}{x-1}$, for positive integers n , determine the following summation, in terms of n (assume n is a positive integer). Express your answer as a fraction, where the numerator has two terms.

$$\sum_{i=2n+1}^{3n} 4^i$$