

Max Gebski - Answers to Test Flight Problem Set

Question 7

Prove that for any natural number n , $2 + 2^2 + 2^3 + \dots + 2^n = 2^{n+1} - 2$

For $n = 1$ we have $2 + 2^1 = 4$ for the LHS, and $2^2 - 2 = 4 - 2 = 2$ for the RHS. Thus, for $n = 1$ the equality holds.