Week 5 - Practice

Problem 1

Prove by induction the following formula
$$2 \times 2 + 3 \times 2^2 + 4 \times 2^3 + \cdots + (n+1) \times 2^n = n \times 2^{n+1}$$

Problem 2

Using the method in Workshop Week 5, find the formula of the following sum:

$$1^3 + 2^3 + \cdots + n^3$$