Esercizio 1.9$'$ Si dimostrino per induzione le seguenti affermazioni:

(i) $\displaystyle\sum_{k=1}^{n} 1 = n.$

(ii) $\displaystyle\sum_{k=1}^{n} c \cdot a_k = c \sum_{k=1}^{n} a_k.$

(iii) $\displaystyle\sum_{k=1}^{n} (a_k + b_k) = \sum_{k=1}^{n} a_k + \sum_{k=1}^{n} b_k := \Big(\sum_{k=1}^{n} a_k\Big) + \Big(\sum_{k=1}^{n} b_k\Big).$