

## Exercises

E7.31 [OFO] *Note: Exam of 9th Apr 2011.* Let  $(a_n)$  be a sequence of real numbers (not necessarily positive) such that the series  $\sum_{n=1}^{\infty} a_n$  converges to  $a \in \mathbb{R}$ ; let  $b_n = \frac{a_1 + \dots + a_n}{n}$ ; show that if the series  $\sum_{n=1}^{\infty} b_n$  converges then  $a = 0$ .