

## Weekly test V

Monday, 27th October 2014

**Ex. 1** Evaluate, if it exists, the following limit:

$$\lim_{n \rightarrow +\infty} \frac{(-1)^n + n + n^5}{n^2 + e^{n-3}}$$

**Ex. 2** Determine if the following series converges or diverges. If it converges calculate the sum:

$$\sum_{n=0}^{+\infty} \left(-\frac{1}{2}\right)^{2n}$$