

**MATHEMATICS**  
**Monday October 26 2015**  
**Weekly test V**

**Ex.1** Evaluate the following limit

$$\lim_{n \rightarrow +\infty} \left( \frac{n+5}{n} \right)^n$$

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

$$\sum_{n=0}^{\infty} (-1)^n \left( \frac{3}{4} \right)^n$$