

Reminder

- ▶ The first exam takes place next class (Friday, February 16).
- ▶ Material covered on the exam:
Sections 0.3, 1.1–1.4, and 2.1–2.2.
- ▶ Please bring your own paper to the exam to write on.

Examples of tricky limits

1. $\lim_{n \rightarrow \infty} (\sqrt{n+2} - \sqrt{n}) = 0$

2. $\lim_{n \rightarrow \infty} n^{1/n} = 1$

3. $\lim_{n \rightarrow \infty} \left(\lim_{m \rightarrow \infty} [\cos(n! \pi x)]^m \right) = \begin{cases} 1, & \text{if } x \in \mathbb{Q} \\ 0, & \text{if } x \notin \mathbb{Q} \end{cases}$