

## MATH101 Section 14 Quiz, Week 4/12/23-8/12/23

### Questions:

1. Give the definition of  $\ln x$  and write down its derivative.
2. State l'Hôpital's Rule.
3. Find

$$\lim_{x \rightarrow \infty} \frac{\ln x}{x}.$$

4. Write  $y = x^{1/x}$ . Find

$$\lim_{x \rightarrow \infty} y.$$

(Hint: Take log's.)