

# MA2002 Midterm Cheatsheets

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September 29, 2022

## 1 Random Results

Suppose  $\lim_{x \rightarrow a} \frac{f(x)}{g(x)} = L$  and  $\lim_{x \rightarrow a} g(x) = 0$ , then  $\lim_{x \rightarrow a} f(x) = 0$ . Otherwise, we can use product limit laws to create a contradiction.

## 2 Week 2

## 3 Week 4

### 3.1 Definition of Limits as $x \rightarrow \pm\infty$