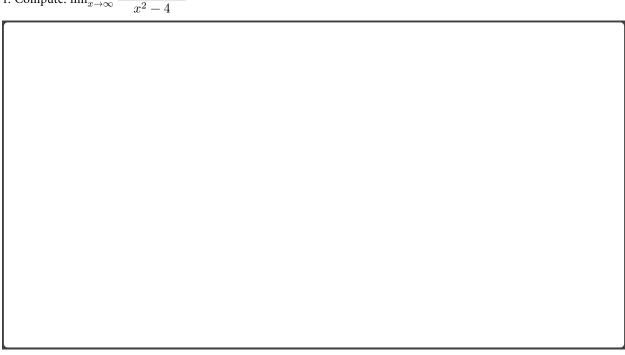
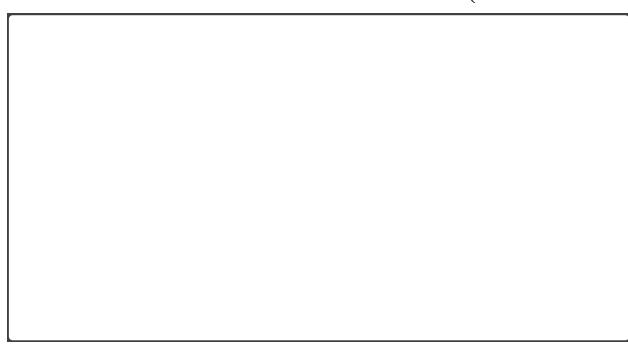
Lecture 13 Worksheet (ECON211), AY 2025-26 [Date: 19 Aug 2025]

1 Computer lim	x^2	_	3x	+	5
1. Compute: $\lim_{x\to\infty}$		2		4	



2. What value of k will make the following function $f(x)$ continuous at $x=2$? $f(x)=\langle$	$\begin{cases} \frac{x^2 - x - 2}{x - 2} \end{cases}$	if $x \neq 2$
	c	if $x = 2$



3. A table fan manufacturer estimates the total weekly cost of producing q units is
$C(q) = 100 + 50q + 10q^2$
Derive the marginal cost function.
What is the actual cost incurred in producing the 101st unit?
Derive the average cost function.
4. The demand for a good is given by $p=400-0.02q$ and the total cost of producing the good is $C(q)=100q+200,000$ i) Derive the profit function (π) . ii) Determine the marginal profit. iii) Compute and interpret $\pi'(2000)$.