

1. Evaluate the limit of each:

(a) $\lim_{x \rightarrow \infty} \frac{2x+1}{x^2+3x-4}$ (2 marks)

(b) $\lim_{x \rightarrow -\infty} \frac{3x^2}{x^2-9}$ (2 marks)

(c) $\lim_{x \rightarrow \infty} \frac{x^2-7x-8}{x+2}$ (2 marks)

(d) $\lim_{x \rightarrow -\infty} x^4 - 5x^3 + 1$ (2 marks)

Mark scheme:

(a) 0 (A2)

(b) 3 (A2)

(c) ∞ (A2)

(d) ∞ (A2)