

**Quiz 3 Solution (Version A)**

1. Find the limit.

$$\lim_{x \rightarrow \infty} \frac{2 + 3x - x^2}{3x^2 - 4}$$

$$\begin{aligned} \lim_{x \rightarrow \infty} \frac{2 + 3x - x^2}{3x^2 - 4} &= \lim_{x \rightarrow \infty} \frac{2/x^2 + 3/x - 1}{3 - 4/x^2} \\ &= -1/3. \end{aligned}$$

2. Sketch the graph of a function for which  $f(0) = 1$ ,  $f'(0) = -1$ ,  $f'(1) = 0$ , and  $f'(2) = 2$ .

