1. Identify all numbers $x$ at which the function $f(x) = \frac{x + 2}{\sqrt{x - 1}}$ is continuous.

2. Given $f(x) = \begin{cases} 3x^2 - 2x & x < -1 \\ 6x^2 + x & x \geq -1 \end{cases}$. Is this function (a) continuous at $x = -1$; (b) discontinuous with a removable discontinuity at $x = -1$; or (c) discontinuous with a jump discontinuity at $x = -1$? Justify your response.

3. Define the function $f(x) = 3x^2 - 2x$. Use one of the formulas:

$$m = \lim_{x \to a} \frac{f(x) - f(a)}{x - a} \quad \text{or} \quad m = \lim_{h \to 0} \frac{f(a + h) - f(a)}{h}$$

Then the slope of the line tangent to the graph of $f$ at the point $(1, 1)$.