$$\dim_{x \to 1} \frac{x - 1}{\sqrt{x} - 1} = \lim_{x \to 1} \frac{(x - 1)(\sqrt{x} + 1)}{(\sqrt{x} - 1)(\sqrt{x} + 1)} = \lim_{x \to 1} \frac{(x - 1)(\sqrt{x} + 1)}{x - 1} = \lim_{x \to 1} (\sqrt{x} + 1) = 2$$

$$\lim_{x \to 2} \frac{\sqrt{3x - 2} - 2}{x - 2} = \lim_{x \to 2} \frac{\left(\sqrt{3x - 2} - 2\right)\left(\sqrt{3x - 2} + 2\right)}{(x - 2)\left(\sqrt{3x - 2} + 2\right)} = \lim_{x \to 2} \frac{3x - 2 - 4}{(x - 2)\left(\sqrt{3x - 2} + 2\right)}$$