

5.35

$$\begin{aligned}
 \lim_{x \rightarrow 1^+} \frac{\sqrt{x^2 - 1} + \sqrt{x - 1}}{\sqrt{x - 1}} & \stackrel{\text{δεν μπορεί να λυθεί με συζυγή παράσταση}}{=} \lim_{x \rightarrow 1^+} \frac{\sqrt{(x-1)(x+1)} + \sqrt{x-1}}{\sqrt{x-1}} \\
 &= \lim_{x \rightarrow 1^+} \frac{\sqrt{x-1}\sqrt{x+1} + \sqrt{x-1}}{\sqrt{x-1}} = \lim_{x \rightarrow 1^+} \frac{\cancel{\sqrt{x-1}}(\sqrt{x+1} + 1)}{\cancel{\sqrt{x-1}}} = \frac{\sqrt{1+1} + 1}{1} = \boxed{\sqrt{2} + 1}
 \end{aligned}$$