

$$\begin{aligned} \frac{15}{(114)} \quad \lim_{x \rightarrow 1^-} \frac{\sin x}{\sqrt{1+\cos x}} \cdot \frac{\sqrt{1-\cos x}}{\sqrt{1-\cos x}} &= \lim_{x \rightarrow 1^-} \frac{\sin x (\sqrt{1-\cos x})}{\sqrt{1-\cos^2 x}} = \lim_{x \rightarrow 1^-} \frac{\sin x \sqrt{1-\cos x}}{\pm \sin x} = \lim_{x \rightarrow 1^-} \pm \sqrt{1-\cos x} = \pm \sqrt{2} \end{aligned}$$