

$$\begin{aligned}\int_0^1 \frac{13 dx}{\sqrt{1-x^2}} &= \lim_{t \rightarrow 1^-} \int_0^t \frac{13 dx}{\sqrt{1-x^2}} = \lim_{t \rightarrow 1^-} [13 \sin^{-1} x]_0^t \\ &= 13 \lim_{t \rightarrow 1^-} \sin^{-1} t = \frac{13\pi}{2}. \quad \text{Convergent.}\end{aligned}$$