

$$\begin{aligned}\int_2^3 \frac{8}{\sqrt{3-x}} dx &= \lim_{t \rightarrow 3^-} \int_2^t 8(3-x)^{-1/2} dx = \lim_{t \rightarrow 3^-} \left[-16(3-x)^{1/2} \right]_2^t \\ &= -16 \lim_{t \rightarrow 3^-} (\sqrt{3-t} - \sqrt{1}) = -16(0 - 1) = 16. \quad \text{Convergent}\end{aligned}$$