

Steps output from Integration,
 Contradictory expressions in **red text**.

$$\int 2 \sqrt{x} \sqrt{1 + \frac{1}{x}} \, dx$$

$$= \int 2 \sqrt{x+1} \, dx \quad \left[\text{rewrite, } 2 \sqrt{x} \sqrt{1 + \frac{1}{x}} = 2 \sqrt{x+1} \right] \quad (1)$$

$$= 2 \left(\int \sqrt{x+1} \, dx \right) \quad [\text{constantmultiple}]$$

$$\int 2 \sqrt{x} \sqrt{1 + \frac{1}{x}} \, dx = 2 \left(\int \sqrt{x+1} \, dx \right) \quad (1)$$

test relation
 $\longrightarrow$

false (2)

$$2 \sqrt{x} \sqrt{1 + \frac{1}{x}} = 2 \sqrt{x+1} \xrightarrow{\text{test relation}} \text{false}$$