

Evaluate

NAME: \_\_\_\_\_

$$\int_{-1}^2 \frac{x+1}{\sqrt{x+2}} dx$$

$$\int \frac{u-1}{\sqrt{u}} du$$

$$\frac{2}{3} u^{3/2} - \frac{2}{1} u^{1/2}$$

$$\left[ \frac{2}{3} (x+2)^{3/2} - \frac{2}{1} (x+2)^{1/2} \right]_{-1}^2$$

$$\left[ \frac{16}{3} - \frac{4}{1} \right] - \left[ \frac{2}{3} - \frac{2}{1} \right]$$

$$\left( \frac{16-12}{3} \right) - \left( \frac{2-6}{3} \right)$$

$$\frac{4}{3} + \frac{4}{3} \Rightarrow$$

$$\boxed{\frac{8}{3}}$$