$$= \frac{3}{4}\int\left(\frac{u^2+1}{4}\right)^{\frac{1}{2}-\frac{1}{2}} \frac{1}{4}\, u\, dx$$

$$= \frac{1}{2}\int du$$

$$= \frac{1}{2}[u] + c$$

$$\int \frac{2x}{(4x^2-1)^{\frac{1}{2}}}\, dx = \frac{\sqrt{4x^2-1}}{2} + c$$