

$$\int \frac{dx}{\sqrt{2x-1}}$$

полагаме

$$t = 2x - 1$$

$$x = \frac{t+1}{2}$$

$$\frac{dx}{dt} = \frac{1}{2}$$

$$dx = \frac{dt}{2}$$

$$\int \frac{dt}{2\sqrt{t}} = \frac{1}{2} \int t^{-\frac{1}{2}} dt = \frac{1}{2} \frac{t^{-\frac{1}{2}+1}}{-\frac{1}{2}+1} + C = \frac{1}{2} \frac{t^{\frac{1}{2}}}{\frac{1}{2}} + C = \sqrt{t} + C$$

връщаме се към полагането $(t = 2x - 1)$

$$\int \frac{dx}{\sqrt{2x-1}} = \sqrt{2x-1} + C$$