

$$2ai) = \int \frac{2x}{(4+3x^2)} dx \rightarrow \int 2x (4+3x^2)^{-1}$$

$$u = 4+3x^2$$

$$\frac{du}{dx} = 6x$$

$$\int \frac{2x}{u} dx$$

$$dx = \frac{du}{6x}$$

$$\int \frac{2x}{u} \frac{du}{6x}$$

$$\frac{1}{6x} \int \frac{2x}{u} du$$