

$$\int F(\sin x, \cos x) dx$$

$$\int F\left(\sin^2 x, \cos^2 x, \sin x \cos x\right) dx$$

$$\begin{vmatrix} t = tg \frac{x}{2} \\ \sin x = \frac{2t}{1+t^2} \\ \cos x = \frac{1-t^2}{1+t^2} \\ dx = \frac{2dt}{1+t^2} \end{vmatrix}$$

$$t = tgx$$

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

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

$$\sin x \cos x = \frac{t}{1+t^2}$$

$$dx = \frac{dt}{1+t^2}$$