11) $\int \left(\frac{1}{\sqrt{x}} \cdot \sin\sqrt{x}\right) dx$

YT3

$u = \sqrt{x} = x^{1/2}$

$du = \frac{1}{2} x^{-1/2} dx$

$du = \frac{1}{2} \cdot \frac{1}{\sqrt{x}} dx$

$2du = \frac{1}{\sqrt{x}} dx$

$= 2\int \sin u \, du$

$= -2\cos u + C$

$= -2\cos\sqrt{x} + C$

12) $\int \frac{\cos(3/x)}{x^2} dx$

YT4

$u = \frac{3}{x} = 3x^{-1}$

$du = -3x^{-2} dx$

$-\frac{1}{3} du = \frac{1}{x^2} dx$

$= -\frac{1}{3} \int \cos u \, du$

$= -\frac{1}{3} \sin\left(\frac{3}{x}\right) + C$

13) $\int \sin(\sin x) \cdot \cos x \, dx$

YT5

$u = \sin x$

$du = \cos x \, dx$

$= \int \sin u \, du$

$= -\cos(\sin x) + C$