



47. $y(\sin x) + g(x)y(\cos x) = f(x).$

Solution in parametric form:

$$x = \sin t, \quad y = \frac{f(t) - g(t)f\left(\frac{\pi}{2} - t\right)}{1 - g(t)g\left(\frac{\pi}{2} - t\right)}.$$

Reference

Polyanin, A. D. and Manzhirov, A. V., *Handbook of Integral Equations: Exact Solutions (Supplement. Some Functional Equations)* [in Russian], Faktorial, Moscow, 1998.