Name: _____ Group ☐

1. Solve the differential equation $x^{-1}\,dx + xt\,dt = 0$. Write your answer in explicit form: x as a function of t.

2. Solve the initial value problem

$$\frac{dy}{dx} = (\cos x)\sqrt{y+2}, \qquad y(\pi) = 0,$$

and write your answer in explicit form: y as a function of x.