quiz 12.

$$I = \int \frac{x \cdot \sin\sqrt{x^2+1}}{\sqrt{x^2+1}}\,dx$$

Consider $u = \sqrt{x^2+1}$, $du = \left[\frac{1}{2}(x^2+1)^{-\frac{1}{2}} \cdot 2x\right]dx = \frac{x}{\sqrt{x^2+1}}\,dx$

$\Rightarrow I = \int \sin u\,du = -\cos u + C = -\cos(\sqrt{x^2+1}) + C.$