Fake Quiz

1.

$$\int x\,dx = \frac{1}{2}\,x^2 + C.$$

2.

$$\frac{d}{dx}\sin x = \cos x.$$

3.

$$y' - y = e^x (ye^{-x})' = 0 \implies ye^{-x} = C, \qquad \therefore y = Ce^x.$$