Do Now:

1. The position of a particle moving along the x-axis is given by: $x(t) = e^{2t} - e^t$ for all $t \geq 0$. When the particle is at rest, the acceleration of the particle is

   (A) $\dfrac{1}{2}$ (B) $\dfrac{1}{4}$ (C) $\ln\dfrac{1}{2}$ (D) 2   (E) 4

2. If $\cos x = e^y$, $0 < x < \pi$, what is $\dfrac{dy}{dx}$ in terms of x?

   (A) $-\tan x$ (B) $-\cot x$ (C) $\cot x$ (D) $\tan x$ (E) $\csc x$