1. Find the derivative of each:

   (a) $y = 3\cos\frac{1}{2}t$ (b) $y = 5t^2e^{-2t}$

2. Find the second derivative of $y = C_1\sin 4t + C_2\cos 4t$, where C_1 and C_2 are constants.

is equivalent to...

is equivalent to

find a function $y = y(t)$ for which $\dfrac{d^2y}{dt^2} = -16y$

which is equivalent to ...

is equivalent to

find a function $y = y(t)$ for which $\dfrac{d^2y}{dt^2} = -16y$

which is equivalent to

solve the differential equation $\dfrac{d^2y}{dt^2} = -16y$