

Fysiikan matematiikka: Harjoitus 10

1. a) $y = -3$ b) $y = e^{2x}$ c) $y = \cos(3x)$
2. a) $y = Ae^x + Be^{-x} - 11x - 1$ b) $x = Ae^{2t} + Bte^{2t} + \frac{1}{6}t^3e^{2t}$
3. a) $z = e^{-x} + \sin x - \cos x$ b) $y = 2 \sin(3x) + \cos(3x) + 3$
4. $\mathbf{v}(t) = -3 \sin t \hat{\mathbf{i}} - 4 \sin t \hat{\mathbf{j}} + 5 \cos t \hat{\mathbf{k}}$
 $\mathbf{a}(t) = -3 \cos t \hat{\mathbf{i}} - 4 \cos t \hat{\mathbf{j}} - 5 \sin t \hat{\mathbf{k}}$
 $v = 5$