

Math 267, Section A2 & D1, Fall 2004, Exam 1keys

#1 $y = -\ln(1 + e^{-1} - e^x)$; the interval of existence is $(-\infty, \ln(1 + e^{-1}))$.

#2 $y = (e^x(x - 1) + C)/x^2$.

#3 $y = \frac{1}{2}\ln(Cx + x^4)$.

#4 $y = (2 + 7x)e^{-4x}$.

#5 $y = e^{-x}(C_1\cos x + C_2\sin x)$.

6 $x = \sqrt{4 + 2v_0^2/(5k)}\cos(\sqrt{5k}/2 t - \phi)$, where $k = 32/5$, $v_0 = 0$.