

You may take these exercises from the written solutions OR just use these:

22. Graph $\ln(x)$, $\log_{10}(x)$, e^x , and 10^x on the same graph.

23. Sketch by transforming:

a. $y = \log(x+5)$ ($= \log_{10}(x)$, of course) and b. $y = -\ln(x)$ ($= \ln(x^{-1}) = \ln\left(\frac{1}{x}\right)$)

#s 27 – 36 Solve for x :

27a. $e^{7-4x} = 6$

27b. $\ln(3x-10) = 2$

28a. $\ln(x^2-1) = 3$

28b. $e^{2x} - 3e^x + 2 = 0$

30a. $e^{3x+1} = k$

30b. $\log_2(mx) = c$

35. $e^{2x} - e^x - 6 = 0$

#s 37-8: Find the solution, correct to 4 decimal places:

37a. $\ln(x^3+1) - 4 = 0$

37b. $2e^{\frac{1}{x}} = 42$

39. Solve for x : a. $\ln(x) < 0$ b. $e^x > 5$

42. Given velocity = $v = v(t) = Ce^{-kt}$, show that...

- ... velocity is proportional to acceleration.
- ... the initial velocity is C .
- When is velocity = half of the initial velocity?