

1. [14 points] Find explicit real-valued general solutions for each of the following. (*Note that minimal partial credit will be given on this problem.*)

a. [7 points] $y' = 2x(e^{-x^2} - y)$

$$y = \underline{\hspace{10cm}}$$

b. [7 points] $y'' = -4y' - 13y$

$$y = \underline{\hspace{10cm}}$$