

MATH 046 020-QUIZ 5, SPRING 2018

Name: _____

1 (6 pts). Consider the second order linear ODE $y'' - 4y = 0$. Show that

- (1) $\{e^{2x}, e^{-2x}\}$ are two solutions of the given equation.
- (2) $\{e^{2x}, e^{-2x}\}$ are linearly independent.

Then find the general solution of the given equation by using the information above.

2 (4 pts). What can one say about the general solution of $y'' - 8y' = 0$ if two particular solutions are known to be $y_1 = e^{8x}$ and $y_2 = 1$?