

MATH 231. QUIZ 4 (26 MINUTES)

Name: _____

Problem 2 is on the back!

Problem 1 (8 points): Write down the undetermined form of $Y_P(t)$ for each of the following. The first is done for you so you know how little you need to do! **DO NOT SOLVE ODE.**

(example) $y'' - 5y' + 6y = t + 1$.

Solution: $Y_P(t) = A_1t + A_0$

(a) $y'' + 4y' + 4y = (t + 1)e^{-2t} \cos(3t)$

(b) $3y'' - 6y' + 3y = 3te^t$

Problem 2 (12 points): Find the general solution of the following ODE:

$$y'' - y' - 2y = 3e^{-t} - 20 \cos(2t).$$