

NAME:

Home Work 11.
MAP 2302 - Differential Equations

Solve the following ODE using the VARIATION OF PARAMETERS:

1. $y'' + y = \tan x$

2. $(x^2 + 1)y'' - 2xy' + 2y = 6(x^2 + 1)^2$; $y_1(x) = x, y_2(x) = x^2 - 1$

3. $y'' + y = \tan x \sec x$

4. $y'' + 6y' + 9y = \frac{e^{-3x}}{x^3}$

5. $y'' - 2y' + y = xe^x \ln x$ ($x > 0$)

6. $x^2y'' - 6xy' + 10y = 3x^4 + 6x^3$; $y_1(x) = x^2, y_2(x) = x^5$

7. $y'' + y = \tan^3 x$

8. $y'' + y = \sec x$