HW05

find a general solution to the given differential equation

1. $2y'' + 7y' - 4y = 0$

3. $y'' + 5y' + 6y = 0$

5. $y'' + 8y' + 16y = 0$

7. $6y'' + y' - 2y = 0$

9. $4y'' - 4y' + y = 0$

solve the given initial value problem

13. $y'' + 2y' - 8y = 0\,; \quad y(0) = 3\,, \quad y'(0) = -12$

15. $y'' - 4y' + 3y = 0\,; \quad y(0) = 1\,, \quad y'(0) = 1/3$

17. $y'' - 6y' + 9y = 0\,; \quad y(0) = 2\,, \quad y'(0) = 25/3$

19. $y'' + 2y' + y = 0\,; \quad y(0) = 1\,, \quad y'(0) = -3$

determine whether the functions y_1 and y_2 are linearly dependent on the interval $(0, 1)$

27. $y_1(t) = \cos t \sin t, \quad y_2(t) = \sin 2t$