

MATH 286 PROBLEMS DUE FEBRUARY 21, 2001

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1. Calculate the general Wronskian of the differential equation

$$x^2y'' + xy' + x^3y = 0, \quad x > 0.$$

2. Calculate the general Wronskian of the differential equation

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

3. Calculate:

$$\frac{4+i}{2+3i}, \quad \sqrt{i}, \quad e^{\frac{7}{2}\pi i}.$$

4. Find a fundamental set of solutions of

$$y'' + y' + 2y = 0.$$