

MATH 286 PROBLEMS DUE JANUARY 17, 2001

IGOR KRIZ

What are the unknowns in the following differential equations? Are the differential equations ordinary or partial? Are they linear? What is their order?

1.

$$t^3 \frac{d^2 y}{dt^2} + \sin(t) \frac{dy}{dt} = \frac{1}{t}.$$

2.

$$e^x \frac{d^3 y}{dx^3} + \frac{1}{y} = 0.$$

3.

$$\frac{d^2 y}{dt^2} + \sin(t^2 + y) = \sin(t).$$