

Who's in My Differential Equations Club? – Class Handout

Answer the following based on what you learned in today's activity.

1. Explain each of the following terms in your own words.

i. Dependent variable

ii. Independent variable

iii. Order

iv. Linearity

2. For each of the following, write a differential equation that satisfies the given criteria.

i. x is the dependent variable, t is the independent variable, third order, nonlinear

ii. y is the dependent variable, t is the independent variable, second order, linear

iii. y is the dependent variable, x is the independent variable, second order, nonlinear

iv. v is the dependent variable, w is the independent variable, first order, linear