

Name: _____

Class/Block: _____ Date: _____

Exploration: Are They Linear? (3)

1. Look at the equations provided. Predict whether each equation represents a linear function. Record your predictions in the table below.

Equation	Record your prediction and explain why you think this is true.
$y = x^2 + 4$	
$4x^2 + y = 4x^2 + 2x + 1$	

2. Explore the **check box** functions in the applet. Click on the check box beside the point. Move the slider and describe what happens.

A. $y = x^2 + 4$
 Show substitution of values for x

B. $4x^2 + y = 4x^2 + 2x + 1$
 Show substitution of values for x



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3. For each equation:

- Plot and observe all the points using the slider
- Click on the “Show graph of equation” check box.
- Observe the graph of the equation to see if it goes through all the given points.
- Record your observations in the table below. Explain whether you would change your prediction based on your observations.

Equation	Record your observations. Explain whether you would change your prediction based on your observations.
$y = x^2 + 4$	
$4x^2 + y = 4x^2 + 2x + 1$	

