

Choosing a Linear, Quadratic, or Exponential Model

Lesson 10-9 (pp. 559-567)

Lesson Objective

▼ Choose a linear, quadratic, or exponential model for data

NAEP 2005 Strand: Algebra

Topic: Algebraic Representations

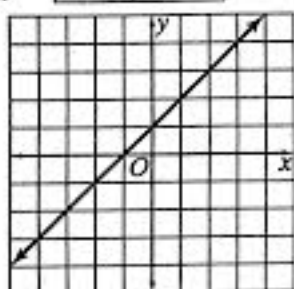
Local Standards: _____

Key Concepts

Linear, Quadratic, and Exponential Functions

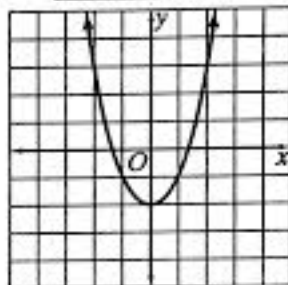
Linear

$y = mx + b$



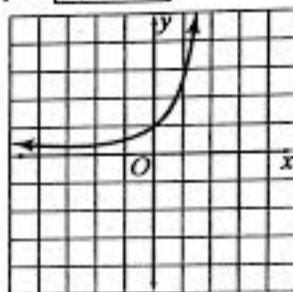
Quadratic

$y = ax^2 + bx + c$



Exponential

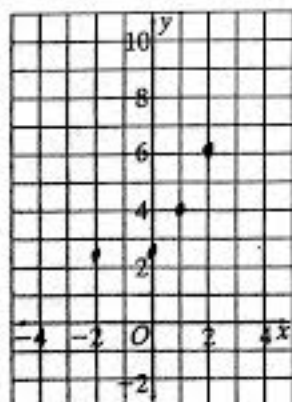
$y = a \cdot b^x$



Examples

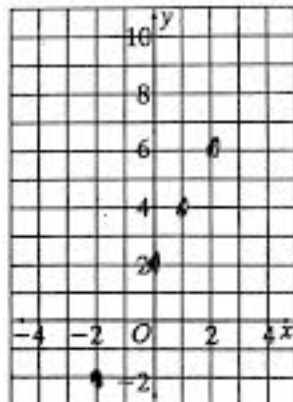
1 Choosing a Model by Graphing Graph each set of points. Which model is most appropriate for each set?

- a. $(-2, 2.25), (0, 3), (1, 4), (2, 6)$



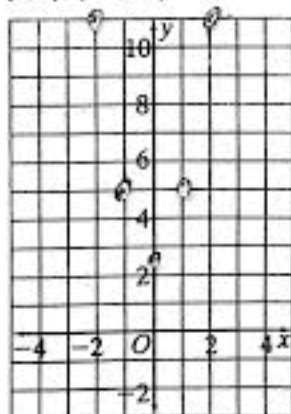
exponential

- b. $(-2, -2), (0, 2), (1, 4), (2, 6)$



linear

- c. $(-1, 5), (2, 11), (0, 3), (1, 5), (-2, 11)$



quadratic