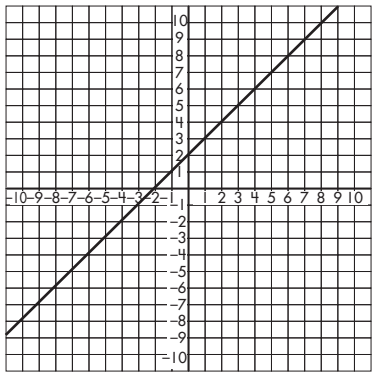
NAME _____

Lesson 4.7 Constructing Function Models

Function models can be constructed by observing points on a graph, calculating the rate of change (or slope), and plugging known values into the equation, $y = mx + b$.



Step 1: Find and name two points on the line. — $(4, 6)$ and $(2, 4)$

Step 2: Calculate the rate of change. — $m = \frac{4 - 6}{2 - 4} = \frac{-2}{-2} = 1$

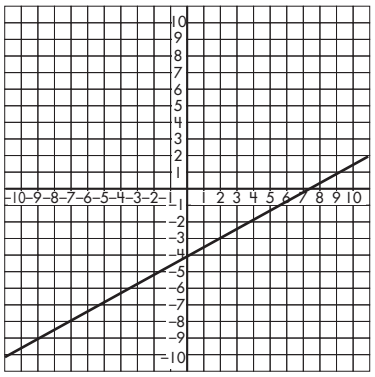
Step 3: Use the found points and calculated slope to find the initial value of the output if it cannot be determined based on the graph. — Based on the graph, the initial value of the output variable is 2.

Step 4: Write the formula for all values of x and y using the equation. — $y = (1)x + 2$, $y = x + 2$

Use the graphs to write function models, or equations, in the form of $y = mx + b$.

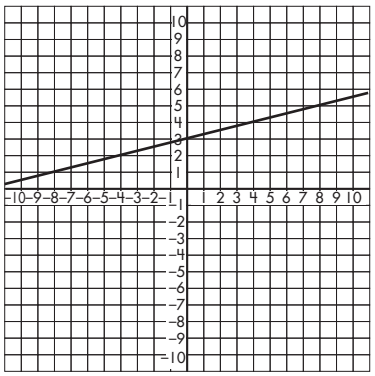
a

1.



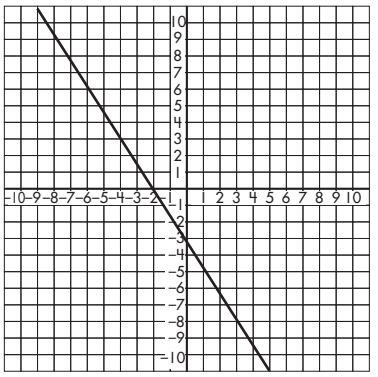
Function Model: _____

2.

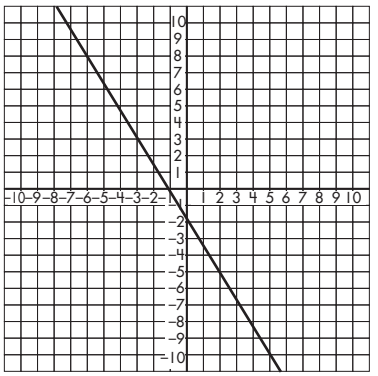


Function Model: _____

b



Function Model: _____



Function Model: _____