Algebra I
Notes Section 1.8
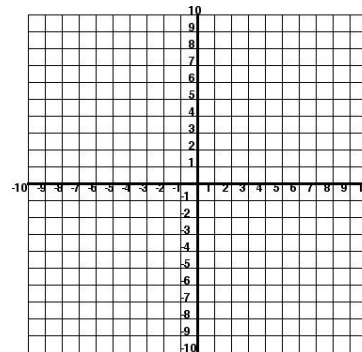### Represent Functions as Graphs

Big Ideas
1. You can graph a function by using its domain and function rule to create an input-output table.
2. You can graph points for each ordered pair in your input-output table.

Horizontal Axis: _____

Vertical Axis: _____

EXAMPLE 1   Graph the function y = 1/2x with domain 0, 2, 4, 6 and 8.

x	1/2x	y
0		
2		
4		
6		
8		

EXAMPLE 2   The table shows the average score s on the mathematics section of the SAT Test in the US from 1997 to 2003 as a function of the time t in years since 1997. In the table, 0 corresponds to the year 1997, 1 corresponds to 1998, and so on. Graph the function.
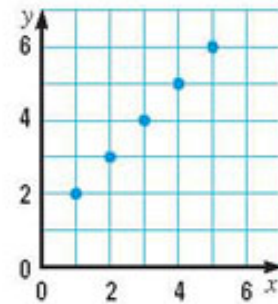
Years since 1997, t	0	1	2	3	4	5	6
Average score, s	511	512	511	514	514	516	519
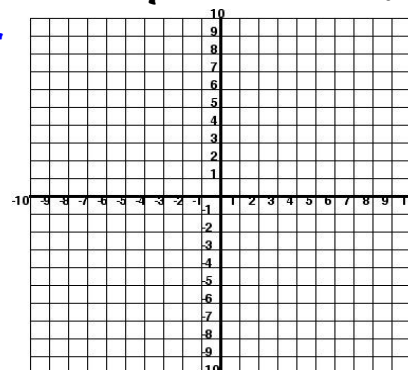
EXAMPLE 3   Write a rule for the function represented by the graph. Identify the domain and the range of the function.

STEP 1   Make a Table

x	y

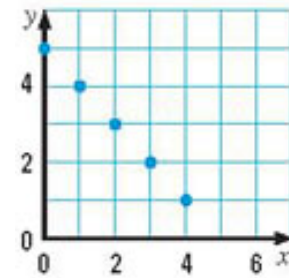**STEP 2   Find a Relationship**

STEP 3   Write a Rule

Domain: _____   Range: _____

STEP 1   Make a Table

x	y

STEP 2   Find a Relationship

STEP 3   Write a Rule

Domain: _____   Range: _____

STEP 1   Make a Table

x	y
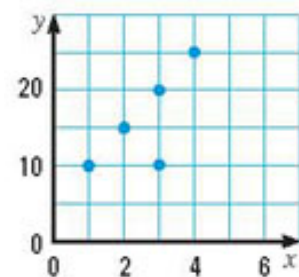
STEP 2   Find a Relationship

STEP 3   Write a Rule

Domain: _____   Range: _____

EXAMPLE 4   The graph shows guitar sales (in millions of $) for a chain of music stores for the period 1999-2005. Identify the independent variable and the dependent variable. Describe how sales changed over the period and how you would expect sales in 2006 to compare to sales in 2005.

Independent Variable: _____

Dependent Variable: _____

_____

_____

_____

Sales (millions of dollars)

1.2

0.8

0.4

0

0 2 4 6 x

Years since 1999