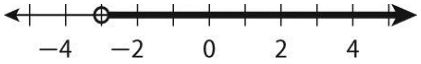
Name _____ Date _____ Class_____

LESSON 1-1

Domain, Range, and End Behavior

Practice and Problem Solving: A/B

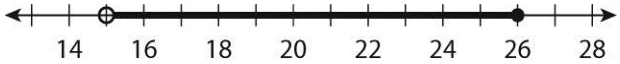
Describe the interval shown using an inequality, set notation, and interval notation.

1. 

Inequality: _____

Set Notation: _____

Interval Notation: _____

2. 

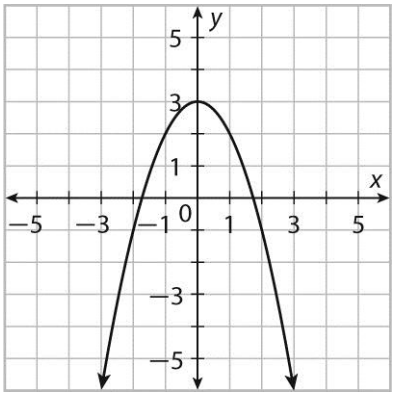
Inequality: _____

Set Notation: _____

Interval Notation: _____

Describe the domain and range of the graph using an inequality, set notation, and interval notation. Then describe its end behavior.

3. Graph of $f(x) = -x^2 + 3$:



Domain:

Inequality: _____

Set Notation: _____

Interval Notation: _____

Range:

Inequality: _____

Set Notation: _____

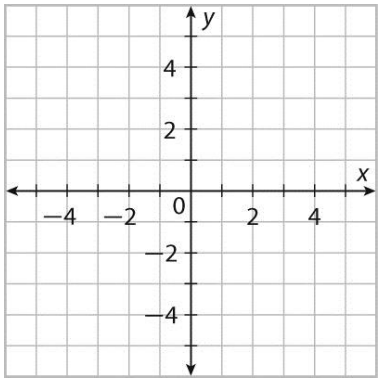
Interval Notation: _____

End Behavior:

_____

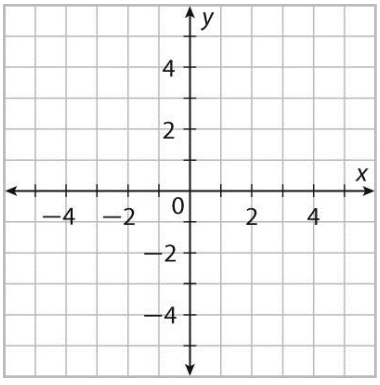
Draw the graph of the function with its given domain. Then determine the range using interval notation.

4. $g(x) = -3x + 2$ with domain $(-1, 2]$:



Range: _____

5. $h(x) = 0.5x - 1$ with domain $(-\infty, 4)$:



Range: _____

Name _____ Date _____ Class_____

Unit 1 Characteristics of Functions

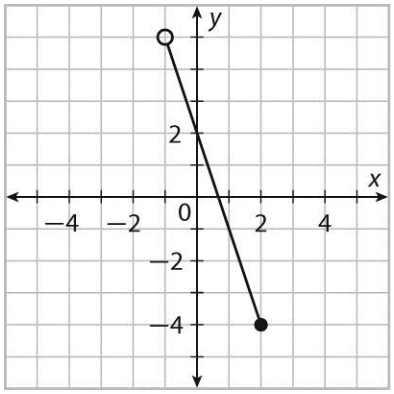
MODULE 1 Analyzing Functions

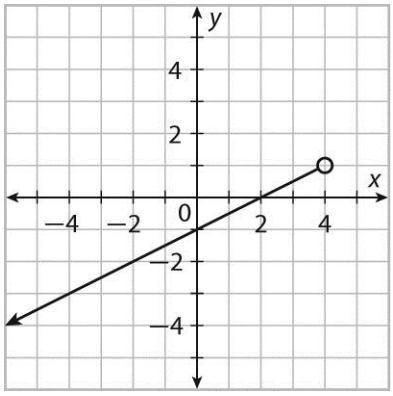
LESSON 1-1

Practice and Problem Solving: A/B

1. Inequality: $x > -3$; Set Notation: $\{x \mid x > -3\}$; Interval Notation: $(-3, +\infty)$
2. Inequality: $15 < x \leq 26$; Set Notation: $\{x \mid 15 < x \leq 26\}$; Interval Notation: $(15, 26]$
3. Domain: Inequality: $-\infty < x < +\infty$; Set Notation: $\{x \mid -\infty < x < +\infty\}$; Interval Notation: $(-\infty, +\infty)$

   Range: Inequality: $-\infty < y \leq 3$; Set Notation: $\{y \mid -\infty < y \leq 3\}$; Interval Notation: $(-\infty, 3]$

   End Behavior: As $x \to +\infty$, $f(x) \to -\infty$;
   As $x \to -\infty$, $f(x) \to -\infty$
4. 

   Range: $[-4, 5)$
5. 

   Range: $(-\infty, 1)$