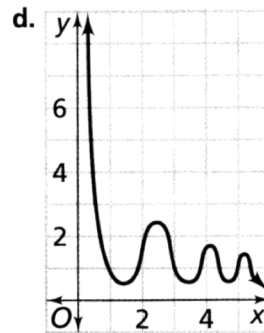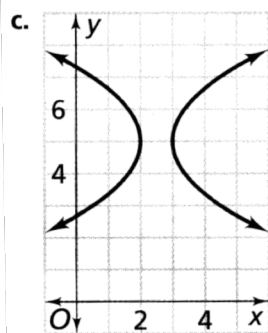# CH. 1 SUMMATIVE REVIEW
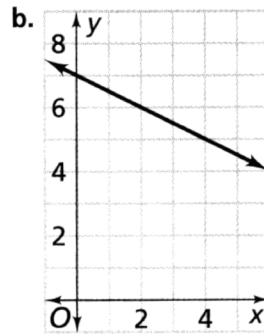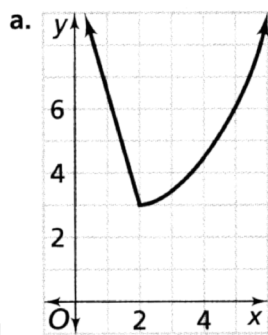
1. The graph below shows the outside temperature recorded every hour for a 24-hour period in Larry's hometown. (F-IF.2)

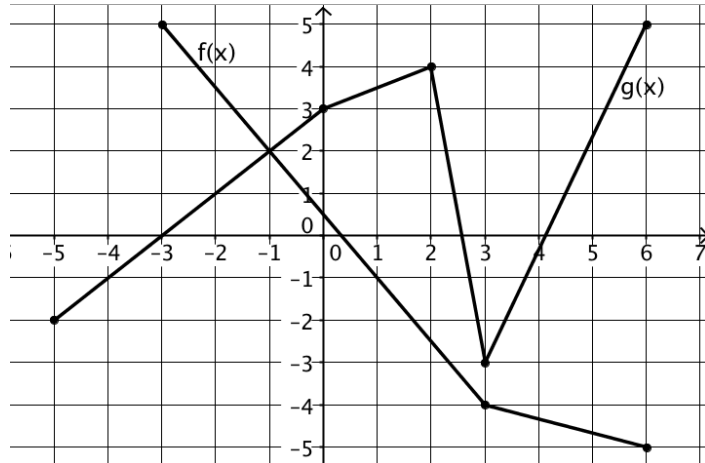**Hourly Temperatures**
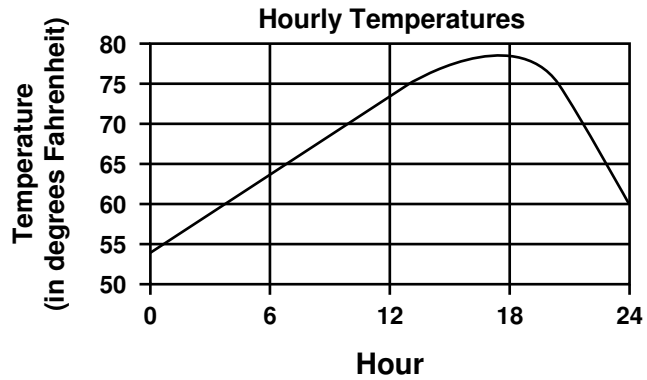
What is the range of this graph?

A   54°F to 78°F

B   1 hour to 24 hours

C   54°F to 60°F

D   24 hours to 80 hours

2. Determine which of the functions below does not represent a function. (F-IF.1)

3. Consider the function $g(x)$ shown below. (F-IF.2)

a. Find $g(2)$.

b. If $f(x) = -1$, find x.

c. What are the values of a and b in the statement $f(a) = g(a) = b$?

4. Larissa is selecting a mobile phone service. Each company charges a fixed monthly fee plus an additional charge for each minute in excess of the free time allowance. (F-IF.2, F-IF.5)

Mobile Phone Service Plans			
Company	Monthly Fee	Free Minutes per Month	Cost per Additional Minute
A	$35	300	$.08
B	$22	400	$.15

Larissa plans to use her mobile phone as her only phone. She predicts that she will use it between 600 and 900 minutes per month. To find the total monthly charge for each company based on m minutes of phone use, Larissa writes the equations below.

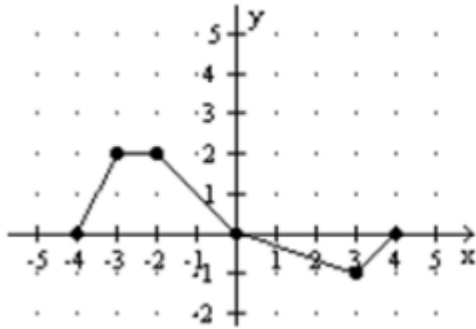Company A $A(m) = 35 + (m - 300)(0.08)$

Company B $B(m) = 22 + (m - 400)(0.15)$

Which company offers the least expensive plan if Larissa uses her phone for 600 minutes per month? Show the work that leads to your answer. (F-IF.2)

Supplemental Review
1) F-IF.A.1

Determine the Domain and Range of the graph below.
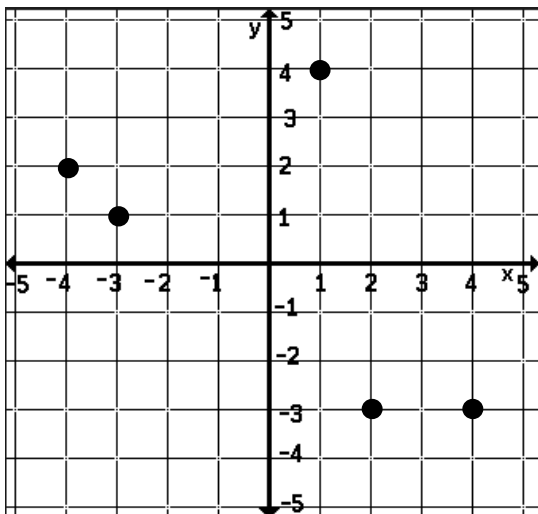

Domain: _____

Range: _____

Function or not? _____

Why? _____

2) F-IF.A.1

Consider the relationship graphed below.

Explain how you know that the relationship is a function of x.

What point could you add to the relationship that would make it no longer a function? Explain your reasoning.

3) F-IF.A.2

4. $f(x) = (5 - x)^2$
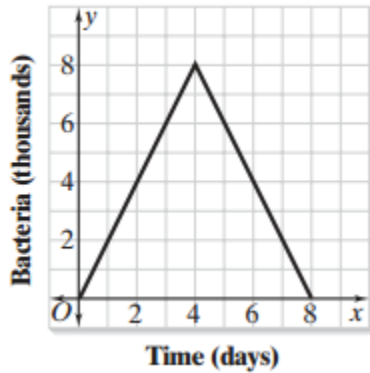 $f(8) = ?$

5. $g(x) = x^2 - 5$
    $g(-3) = ?$

6. $f(x) = \frac{2x+7}{x^2-9}$
    $f(3) = ?$

3

4) **F-IF.B.5**

Interval Notation and *GRAPHS*
(write the **DOMAIN** and **RANGE** for each Graph in Interval Notation)

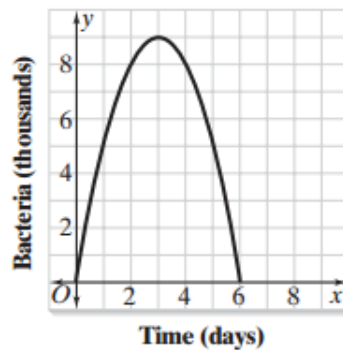| D:	D:	D:	D:
R:	R:	R:	R:

5) F.IF.B.5

Find the domain and range of the function graphed below.

A Domain: $0 \le x \le 4$; Range: $0 \le y \le 4$

B Domain: $0 \le x \le 8$; Range: $0 \le y \le 4$

C Domain: $0 \le x \le 4$; Range: $0 \le y \le 8$

D Domain: $0 \le x \le 8$; Range: $0 \le y \le 8$

6) **F-IF.B.5** _____

The graph below represents the population of bacteria on a slide over time during a laboratory experiment. What is the range of the function described by the graph?

a) 0 days to 6 days

b) 0 to 6 thousand bacteria

c) 0 days to 9 days

d) 0 to 9 thousand bacteria

7) **F-IF.A.2, F-IF.B.4**

Chicago's average monthly rainfall, $R = f(t)$ inches, is given as a function of month, t, in the table below. (January is $t = 1$). Solve and interpret:

(a) $f(t) = 3.7$

t	1	2	3	4	5	6	7	8
R	1.8	1.8	2.7	3.1	3.5	3.7	3.5	3.4

(b) $f(t) = f(2)$