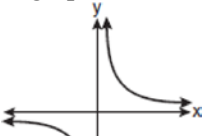
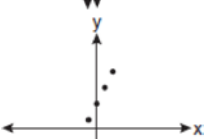

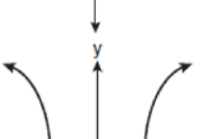
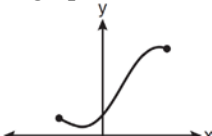
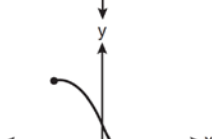
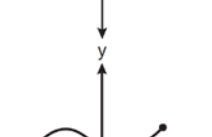
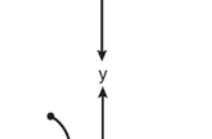


**F.IF.A.1: Defining Functions 2**

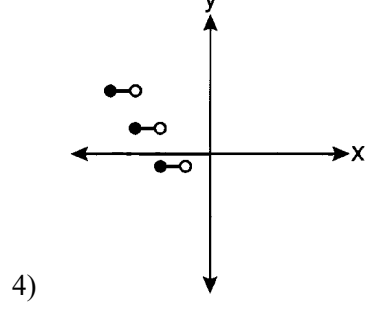
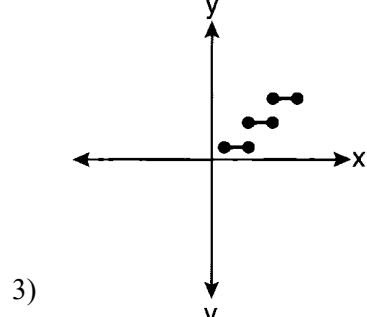
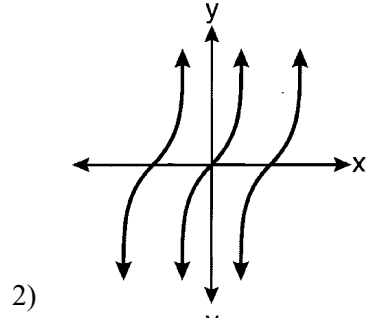
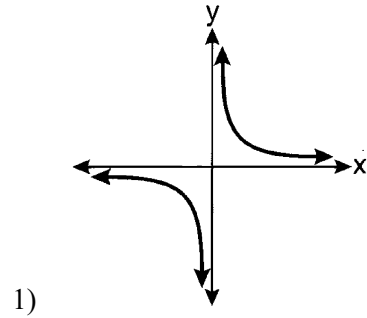
1 Which graph does *not* represent a function?

- 1) 
- 2) 
- 3) 
- 4) 

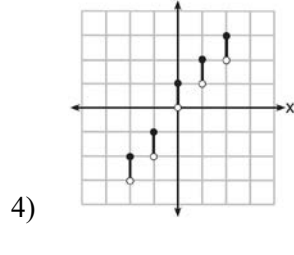
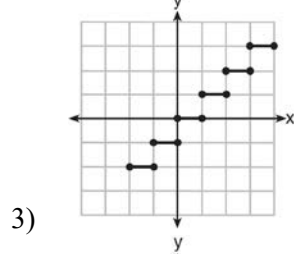
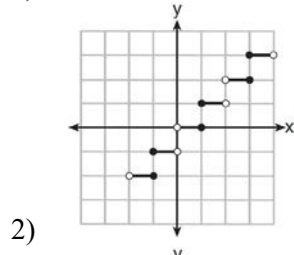
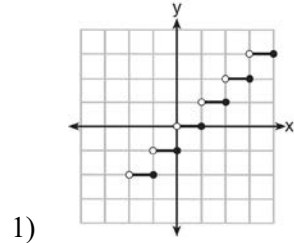
2 Which graph does *not* represent a function?

- 1) 
- 2) 
- 3) 
- 4) 

3 Which graph represents a relation that is *not* a function?



4 Which graph represents a function?



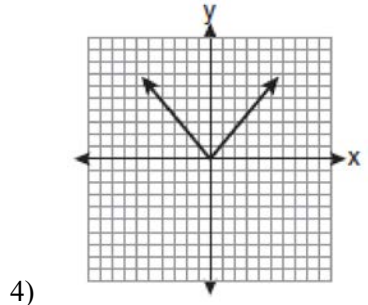
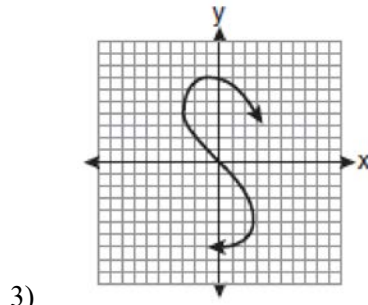
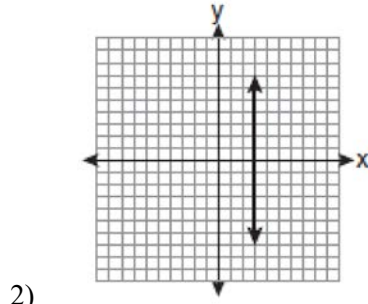
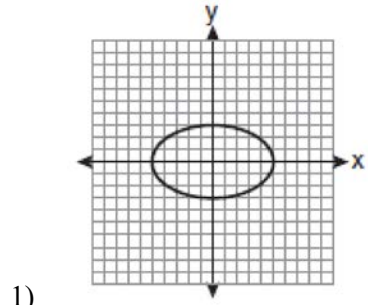
5 Which graph represents a function?

- 1)
- 2)
- 3)
- 4)

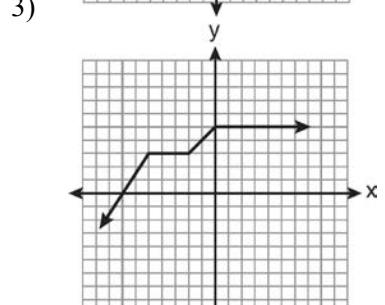
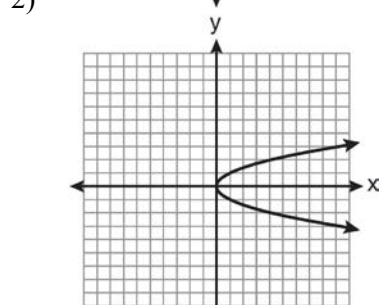
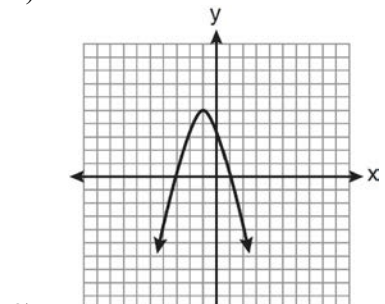
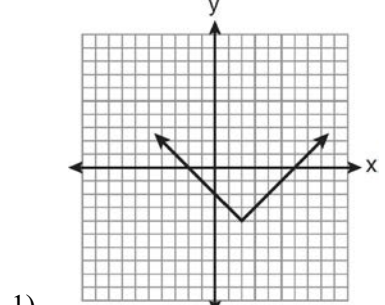
6 Which graph represents a function?

- 1)
- 2)
- 3)
- 4)

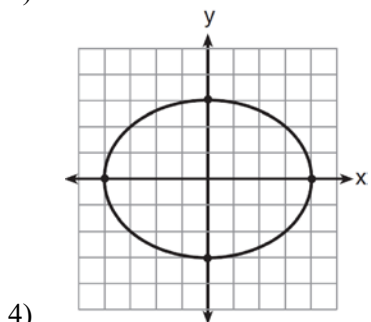
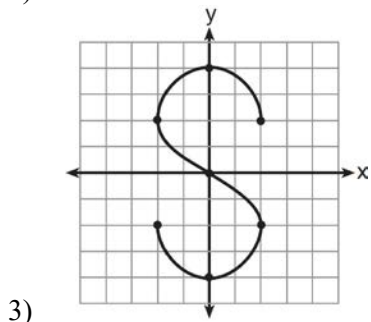
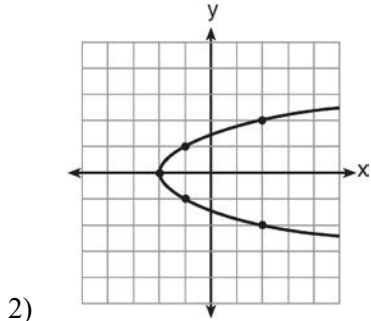
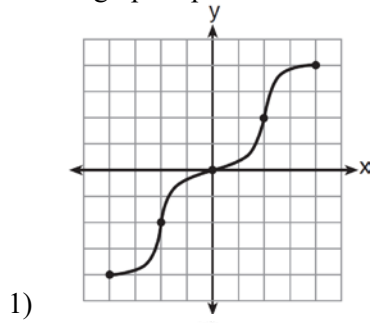
7 Which graph represents a function?



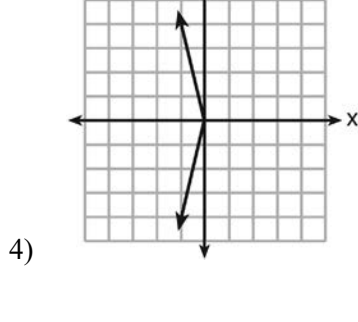
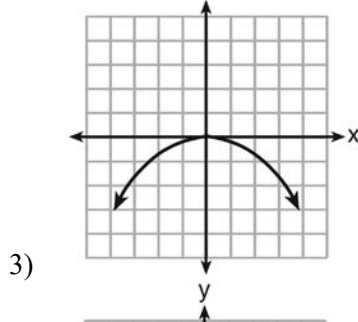
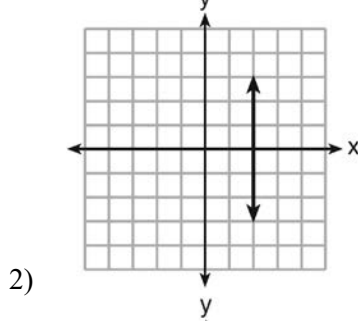
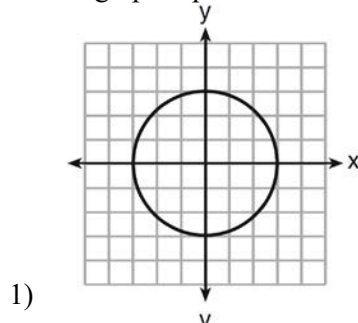
8 Which graph does *not* represent a function?



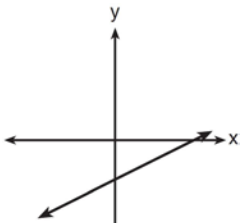
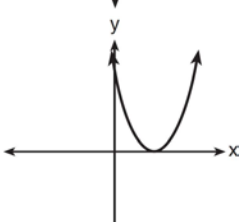
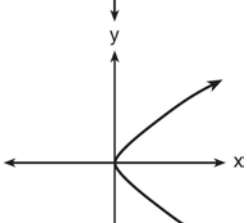
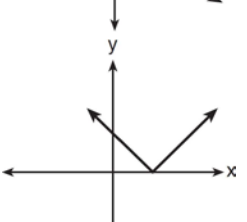
9 Which graph represents a function?



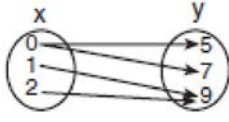
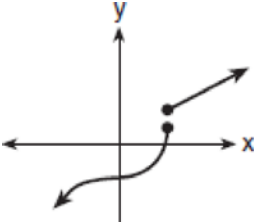
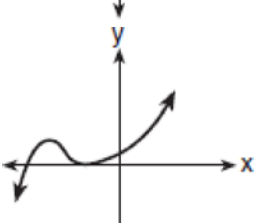
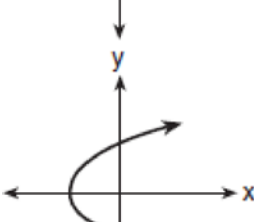
10 Which graph represents a function?



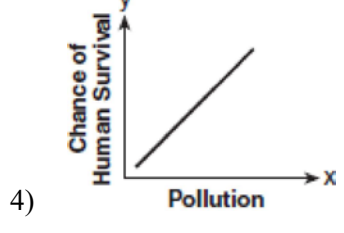
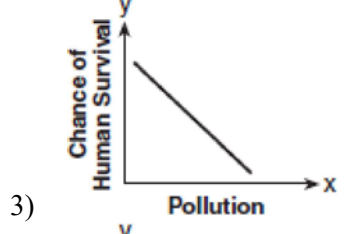
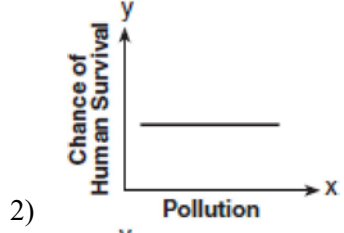
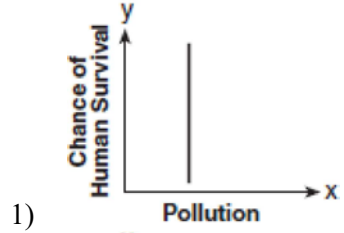
11 Which graph does *not* represent the graph of a function?

- 1) 
- 2) 
- 3) 
- 4) 

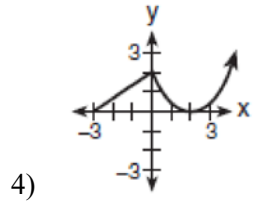
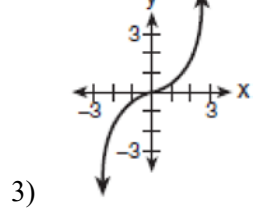
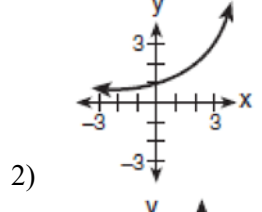
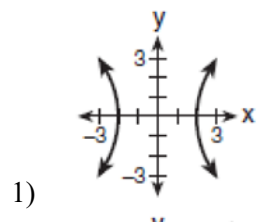
12 Which diagram represents a relation in which each member of the domain corresponds to only one member of its range?

- 1) 
- 2) 
- 3) 
- 4) 

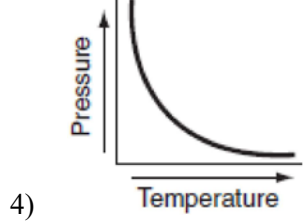
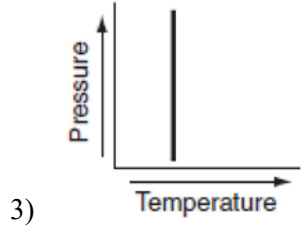
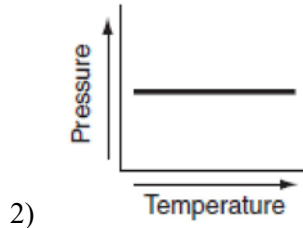
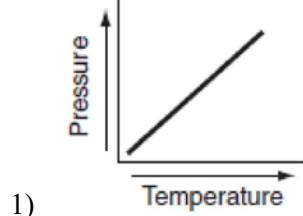
13 Which graph does *not* represent a function of  $x$ ?



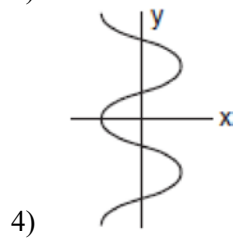
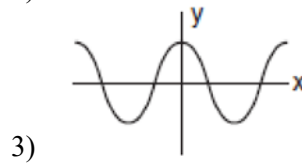
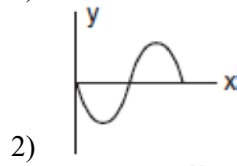
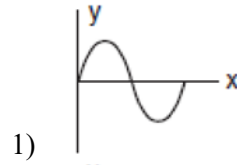
14 Which graph is *not* a function?



15 Each graph below represents a possible relationship between temperature and pressure. Which graph does *not* represent a function?

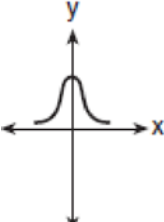
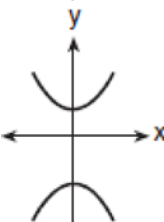
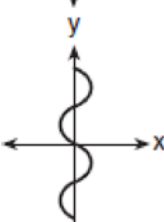
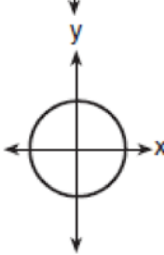


16 Which graph does *not* represent a function?

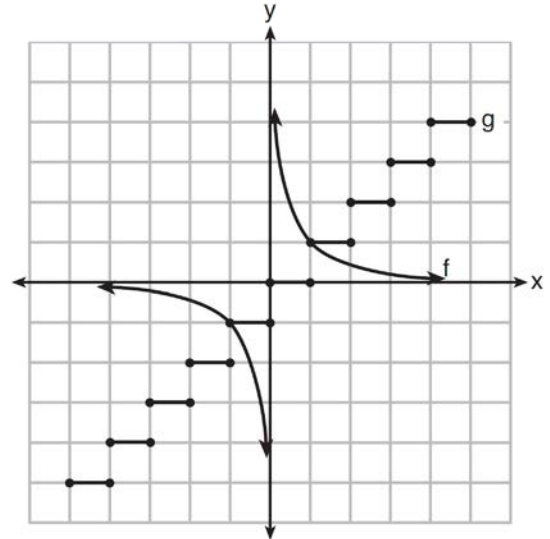




17 Which graph represents a function?

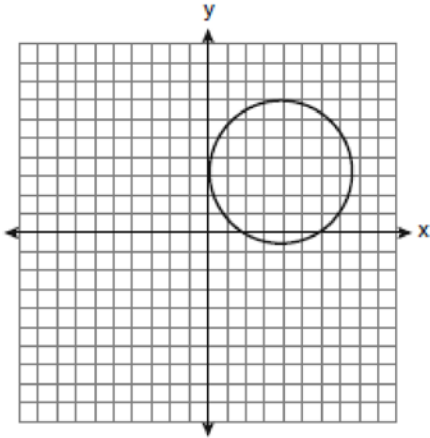
- 1) 
- 2) 
- 3) 
- 4) 

18 Which statement is true about the graphs of  $f$  and  $g$  shown below?



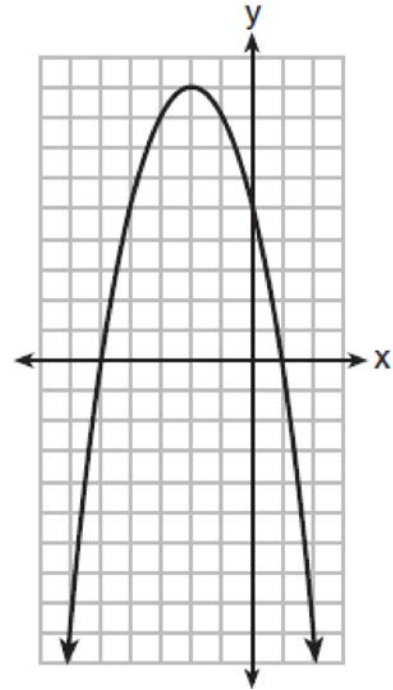
- 1)  $f$  is a relation and  $g$  is a function.  
 2)  $f$  is a function and  $g$  is a relation.  
 3) Both  $f$  and  $g$  are functions.  
 4) Neither  $f$  nor  $g$  is a function.

19 Which statement is true about the relation shown on the graph below?



- 1) It is a function because there exists one  $x$ -coordinate for each  $y$ -coordinate.
- 2) It is a function because there exists one  $y$ -coordinate for each  $x$ -coordinate.
- 3) It is *not* a function because there are multiple  $y$ -values for a given  $x$ -value.
- 4) It is *not* a function because there are multiple  $x$ -values for a given  $y$ -value.

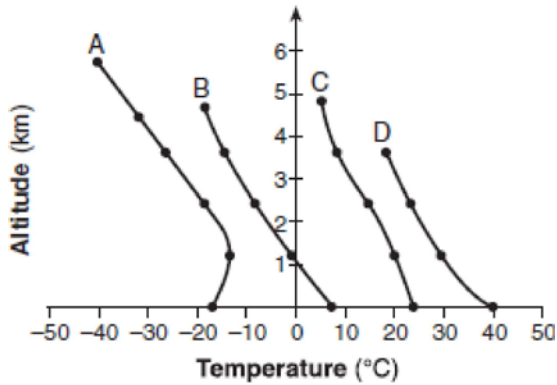
20 A relation is graphed on the set of axes below.



Based on this graph, the relation is

- 1) a function because it passes the horizontal line test
- 2) a function because it passes the vertical line test
- 3) not a function because it fails the horizontal line test
- 4) not a function because it fails the vertical line test

- 21 The accompanying graph shows the curves of best fit for data points comparing temperature to altitude in four different regions, represented by the relations  $A$ ,  $B$ ,  $C$ , and  $D$ .



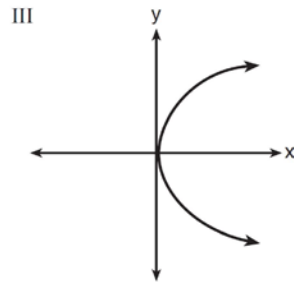
Which relation is *not* a function?

- 1)  $A$
- 2)  $B$
- 3)  $C$
- 4)  $D$

- 22 Which representations are functions?

I

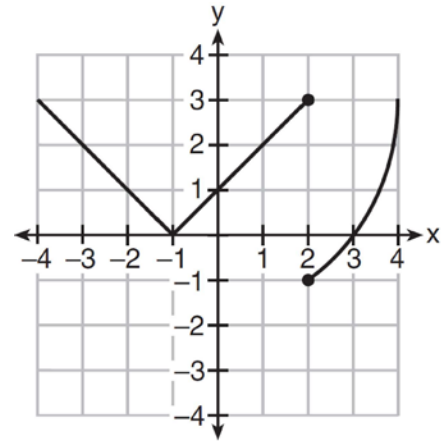
x	y
2	6
3	-12
4	7
5	5
2	-6



II  $\{(1,1), (2,1), (3,2), (4,3), (5,5), (6,8), (7,13)\}$       IV  $y = 2x + 1$

- 1) I and II
- 2) II and IV
- 3) III, only
- 4) IV, only

- 23 Marcel claims that the graph below represents a function.



State whether Marcel is correct. Justify your answer.

- 24 Nora says that the graph of a circle is a function because she can trace the whole graph without picking up her pencil. Mia says that a circle graph is *not* a function because multiple values of  $x$  map to the same  $y$ -value. Determine if either one is correct, and justify your answer completely.

**F.IF.A.1: Defining Functions 2****Answer Section**

- 1 ANS: 4 REF: fall0908a2  
2 ANS: 4 REF: 011101a2  
3 ANS: 3 REF: 061114a2  
4 ANS: 1 REF: 061409a2  
5 ANS: 4 REF: fall0730ia  
6 ANS: 4 REF: 010930ia  
7 ANS: 4 REF: 061013ia  
8 ANS: 3 REF: 011204ia  
9 ANS: 1 REF: 061209ia  
10 ANS: 3 REF: 011309ia  
11 ANS: 3 REF: 081308ia  
12 ANS: 3 REF: 060310b  
13 ANS: 1 REF: 080301b  
14 ANS: 1 REF: 010511b  
15 ANS: 3 REF: 060601b  
16 ANS: 4 REF: 010213siii  
17 ANS: 1 REF: 060320siii  
18 ANS: 2 REF: 011507a2  
19 ANS: 3 REF: 060919ia  
20 ANS: 2 REF: 011804ai  
21 ANS: 1 REF: 060902b  
22 ANS: 2 REF: 081511ai

23 ANS:

No, because the relation does not pass the vertical line test.

REF: 011626ai

24 ANS:

Neither is correct. Nora's reason is wrong since a circle is not a function because it fails the vertical line test. Mia is wrong since a circle is not a function because multiple values of  $y$  map to the same  $x$ -value.

REF: 011732ai