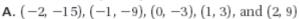
1. Which ordered pair represents a linear function?



C.
$$(-2, -1), (-1, -4), (0, -5), (1, -4)$$
 and $(2, -1)$

2. The following ordered pairs represent a function: (-2, 10), (-1, 7), (0, 6), (1, 7), and (2, 10). Which equation could represent the function?

F.
$$y = -4x + 2$$
 G. $y = x^2 - 6$

G.
$$y = x^2 - 6$$

H.
$$y = 5x$$

I.
$$y = x^2 + 6$$

3. Which rule could represent the function shown by the table at the right?



B.
$$y = x^2 + 1$$

C.
$$y = -x^2 + 1$$

D.
$$y = -x - 1$$

х	y
-2	-3
-1	0
0	1
1	0
2	-3

4. The ordered pairs (-1, 1), (0, 2), (1, 1), (2, -2), and (3, -7) represent a function. Which rule could represent the function?

F.
$$v = -x^2 - 2$$

F.
$$v = -x^2 - 2$$
 G. $v = -x^2 + 2$ H. $v = x^2 - 2$

H.
$$v = x^2 - 2$$

I.
$$y = x^2 + 2$$

5. Which ordered pair represents a nonlinear function?

A.
$$(0, 0)$$
, $(1, 1)$, $(2, 2)$, $(3, 3)$, and $(4, 4)$ C. $(0, -1)$, $(1, 0)$, $(2, 1)$, $(3, 2)$, and $(4, 3)$

B.
$$(0, 0), (1, -1), (2, -2), \text{ and } (4, -4)$$

6. A certain function fits the following description. As the value of x increases by 1 each time, the value of y decreases by the square of x. Is this function linear or nonlinear? Explain your answer.

7. The rule C = 6.3r gives the approximate circumference D of a circle as a function of its radius r. Identify the independent and dependent variable in this relationship. Explain your reasoning.