Name_____

Function Notation

Decide which of the following are functions:

1)

2)

3)

4)

5)

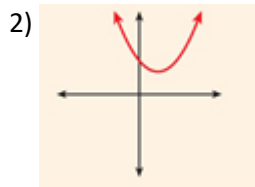| x	y
1	1
4	4
8	1

6)

7)
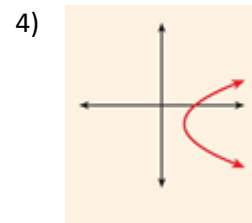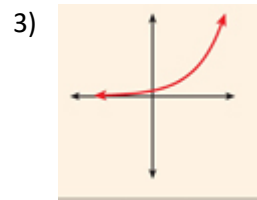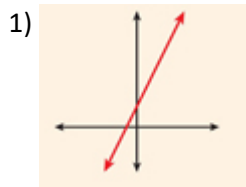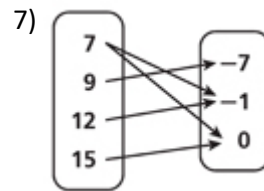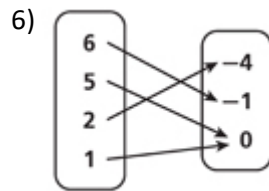
8)

X	1	3	5	7	9	11
Y	2	4	6	8	10	12

9)

X	3	3	3	3	3	3
Y	1	2	3	4	5	6

Evaluate each function:

10) $g(x) = 4x + 2$; find $g(10)$.

11) $f(x) = x^2 + 2x$; find $f(2)$.

12) $f(n) = 4n$; find $f(3)$.

13) $h(n) = n^2 - 3n$; find $h(-6)$.

14) $f(x) = x^2 + 5$; find $f(8)$.

15) $h(x) = x^2 - 4$; find $h(10)$.

16) $f(x) = 2x^2 + 3x + 7$; find $f(3)$.

17) $p(d) = d^3 - 2$; find $p(-2)$.

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18. Beth wants to join the Movie Club. There is a $30 startup fee and a $4 monthly fee. Which of the following represent the input, output, and appropriate function for this scenario?

   A. **Input**: the total cost, **Output:** the starting cost, **Function:** $C(x) = 30x + 4$

   B. **Input**: the total cost, **Output:** the number of months, **Function:** $C(x) = 30x + 4$

   C. **Input:** each month, **Output:** the total cost, **Function:** $C(x) = 4x + 30$

   D. **Input:** each month, **Output:** the starting cost, **Function:** $C(x) = 4x + 30$

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19. Use the table to answer the following:

x	-3	-1	0	1	3
y	5	7	9	11	13

a. Express the relation as ordered pairs.

b. Does the relation represent a function? Explain.

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20. Coach Gaffney's candy jar can be represented by the function $c(x) = -3x + 150$, where x represents days of school and c(x) represents the amount of candy remaining. There have been 10 days of school. Which statement represents the amount of candy that she has left in her jar?

   A. $c(10) = 120$ B. $c(x) = 120$

   C. $c(10) = 180$ D. $c(x) = 180$