

Now-Next Formulas & Graphs

Write a NOW-NEXT equation for each sequence, and then use your equation to find the 10th term of that sequence.

1. 3, 9, 27, 81,...

Start: _____

Now-Next Eqn: _____

Formal Recursive Equation: _____

6th Term in Sequence: _____

2. 41.2, 40.3, 39.4, 38.5, ...

Start: _____

Now-Next Eqn: _____

Formal Recursive Equation: _____

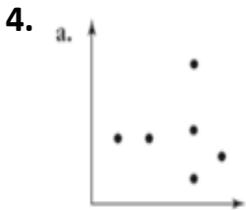
a_7 : _____

3. -6, 12, -24, 48, -96, ...

Formal Recursive Equation: _____

Tests for Functions

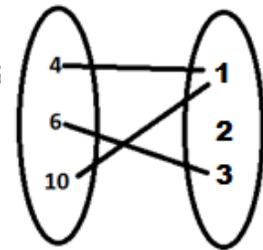
Determine if the following relations are functions. If a relation is not a function, explain why it is not.



Function: Yes No

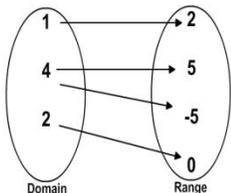
X	Y
4	2
-5	15
11	14
-1	5
-3	6

Function: Yes No



why it is not.

Function: Yes No



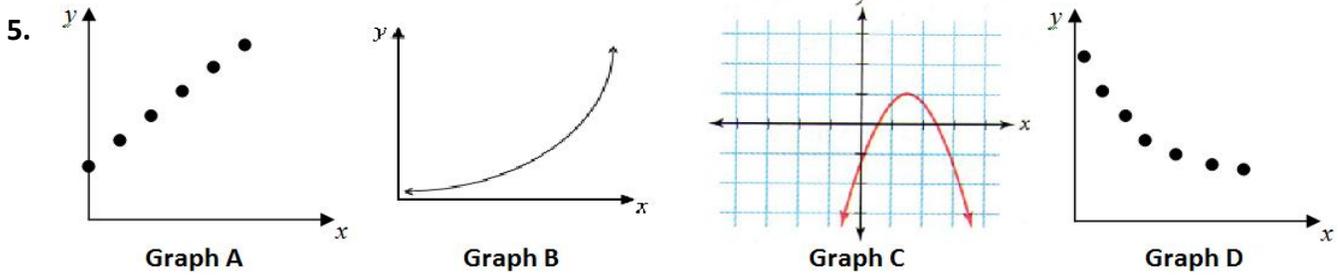
Function: Yes No

X	Y
-3	19
8	10
5	12
-6	27
8	10

Function: Yes No

$\{(0, -2), (2, 4), (4, 7), (2, -3)\}$

Function: Yes No



Which are nonlinear? _____

Which graph(s) have a constant rate of change? _____

Which are discrete? _____ Which are continuous? _____

6. Given $f(x) = -3x + 2$ and $g(x) = \frac{1}{2}x - 4$, find each of the following.

a. $f(-4)$

b. $f(4)$

c. $g(-5)$

d. $g(5)$

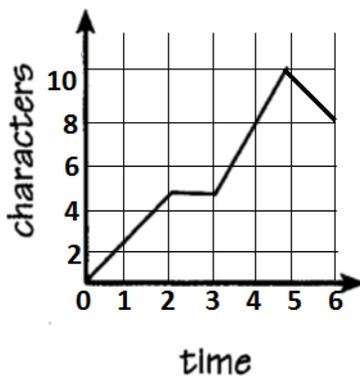
e. Find x if $f(x) = 9.5$

f. $f(-4) - g(-5)$

7. Given the graph, answer the following questions:

a. What is the dependent variable in this graph? _____

Using inequality notation, list the domain, range and when the function is increasing, decreasing, and constant:



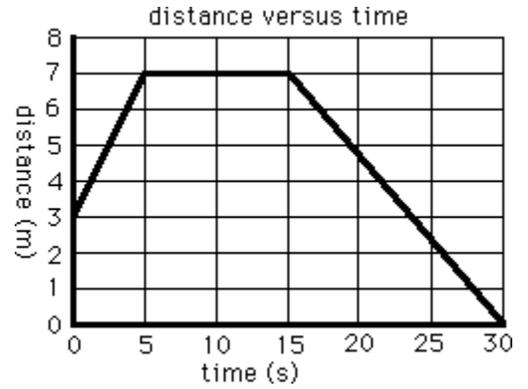
b. Domain: _____ c. Range: _____

d. Increasing: _____ e. Decreasing: _____

f. Constant: _____ g. Find $f(4)$: _____

h. Find $f(g)$: _____ i. Find x if $f(x)=10$: _____

8. Given the graph to the right, answer the following questions regarding a dog's walk: (Name using inequality notation)

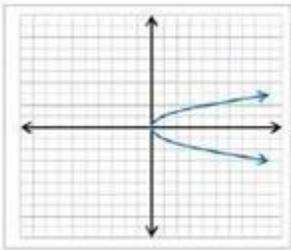


- a. Where is the dog walking away from home?

- b. Where is the dog not walking? _____
- c. Where is the dog walking/running the fastest? _____
- d. Where is the dog walking back towards the house? _____

9. Find the domain and range:

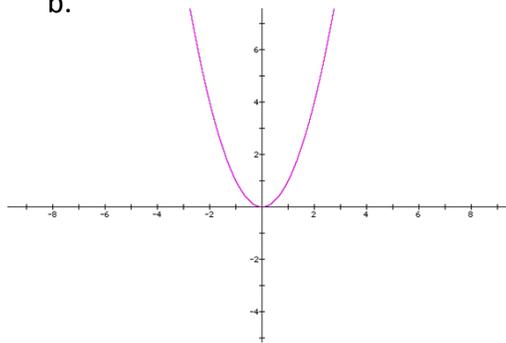
a.



Domain: _____

Range: _____

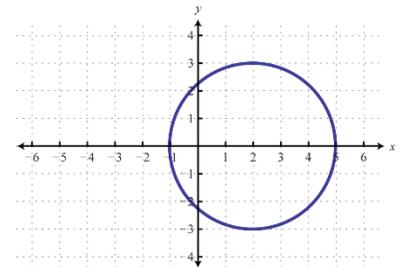
b.



Domain: _____

Range: _____

c.



Domain: _____

Range: _____