

III. Linear Functions

** Remember that all linear functions have a constant rate of change.

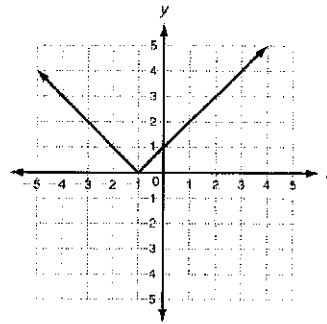
Function notation

19. Determine if the following is a relation or a function.

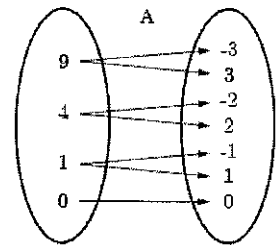
a.

x	0	1	2	3	4
y	8	11	14	14	20

b.



c.



20. Rewrite the equation as a function.

$$y = 5x - 2$$

21. Write the coordinate point that this corresponds to.

$$f(8) = 0$$

Continuous/Discrete

21. Determine if the relations/functions from problem #19 are discrete or continuous.

a.

b.

c.

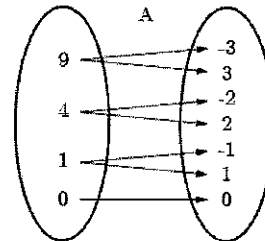
Domain/Range and Input/output

22. Identify the domain and range.

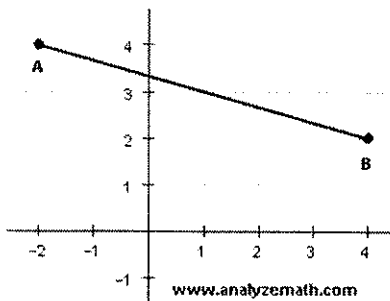
a.

x	0	1	2	3	4
y	8	11	14	17	20

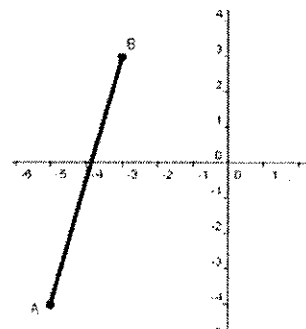
b.



c.



d.



Evaluation functions

23. $h(x) = x^2 - x + 1$ $g(x) = 3x - 6$

a. $h(-7) =$

b. find x , if $g(x) = 12$

24.

x	0	1	2	3	4
$f(x)$	8	3	0	17	1

a. $f(1) =$

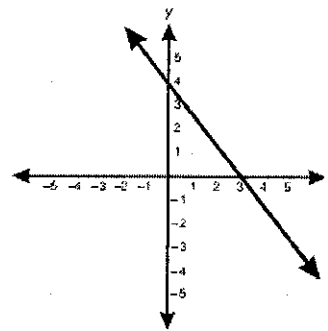
b. find x , if $f(x) = 0$

Finding slope- graph, table, 2 points, function

25. Find the slope over the interval $[2, 3]$

x	0	1	2	3	4
$f(x)$	8	3	0	17	1

26. Find the slope over the interval $[0, 3]$



27. Find the slope over the interval $[0, 5]$ of the function $f(x) = 3x + 1$

28. Find the slope between the two points $(10, 20)$ and $(-4, 5)$