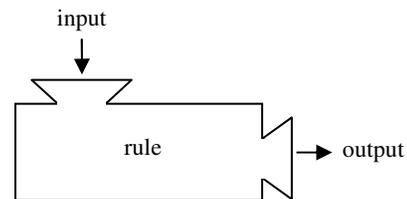


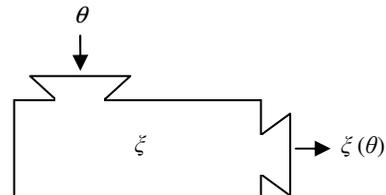
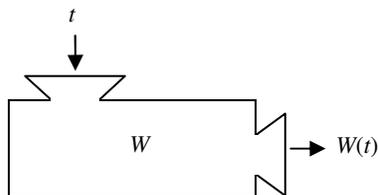
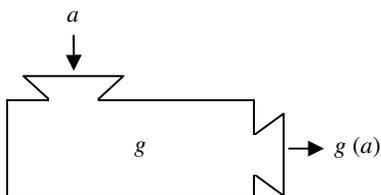
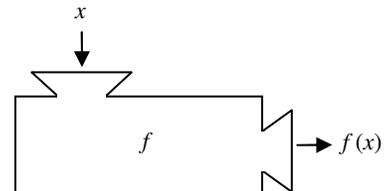
Informal definition

A **function** is a rule that assigns to each allowable input exactly one output.

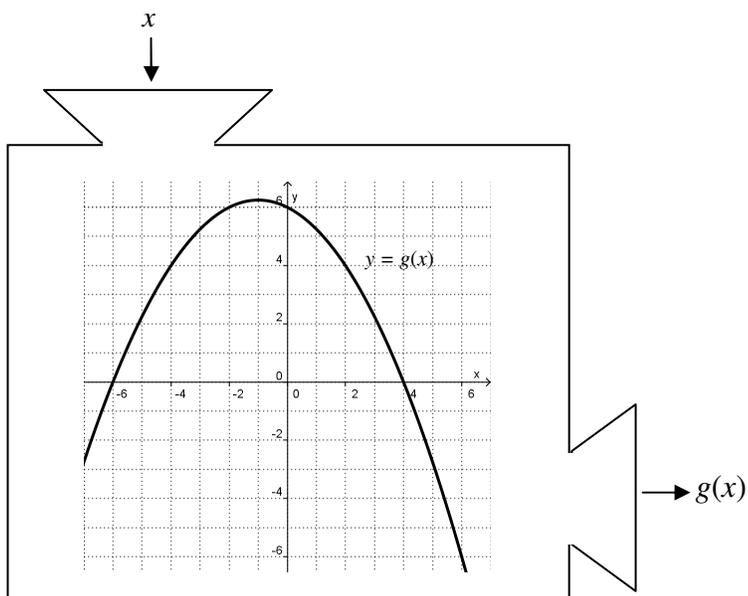
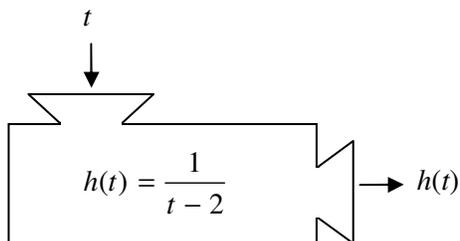
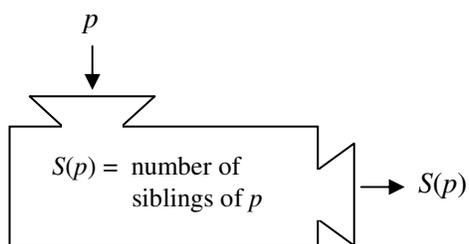
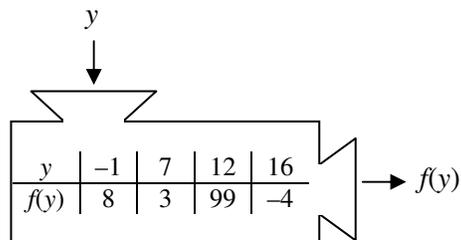
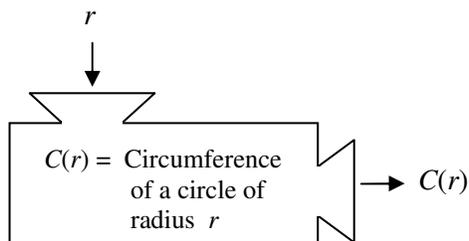


Formal definition

A **function** is a rule that assigns to each element x in a set A exactly one element, called $f(x)$, in a set B .



Consider the following functions. All of the questions on the next page refer to these five functions.



- | | | |
|----------------------------|-----------------|--------------------|
| 1. $C(5)$ | 8. $h(1)$ | 15. $f(-1)$ |
| 2. $C(-4)$ | 9. $h(3)$ | 16. $f(99)$ |
| 3. $C(a)$ | 10. $h(102)$ | 17. $g(2)$ |
| 4. $S(\text{you})$ | 11. $h(2.0001)$ | 18. $g(-4)$ |
| 5. $S(\text{your mother})$ | 12. $h(1.9999)$ | 19. $g(-1)$ |
| 6. $S(3)$ | 13. $h(2)$ | 20. $g(0) + g(-2)$ |
| 7. $h(0)$ | 14. $h(t + 10)$ | 21. $g(7)$ |

The set of all inputs which a function accepts is called the **domain** of the function. The set of all outputs resulting from the acceptable inputs is called the **range**.

22. State the domain and range of each function.

	domain	range
$C(r)$		
$S(p)$		
$h(t)$		
$f(y)$		
$g(x)$		

23. Carefully graph $y = h(t)$

