

1.1

Def<sup>n</sup>

A function consists of a domain, (a set  $A$ , for us usually just the real numbers.) and a rule that assigns to each element  $x$  of  $A$  exactly one element, called  $f(x)$ , of a set  $B$  (the range).

1.1

2 a  $f(-4) = -2$   $g(3) = 4$  ✓  
b  $f(-2) = 1$  and  $f(2) = 2$ ,  $g(-2) = 1$ ,  $g(2) = 2$   
c.  $x = -3$ ,  $f(x) = 4$   
 $f(x) = -1$ ,  $f(-3) = -1$ ,  $f(4) = -1$

precise answer:  
 $x = -2, 2$

$x \in [0, 4]$  → Ans:  $x = -3, 4$

$[0, \infty)$  }  $0 \leq x \leq 4$

domain =  $[-4, 4]$  }  $0 \leq x < \infty$

range =  $[-2, 3]$  }  $\infty$  ☺

f domain =  $[-4, 3]$   
range =  $[-2, 4]$  }  $\{y \mid \frac{1}{2} \leq y \leq 4\}$