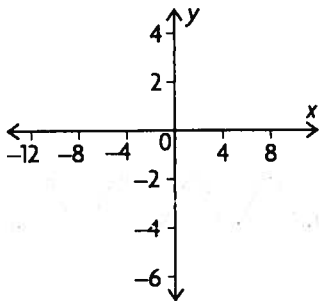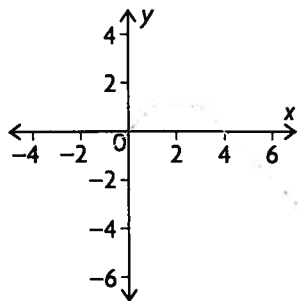# CHECK Your Understanding

1. State the domain and range of each relation. Then determine whether the relation is a function, and justify your answer.
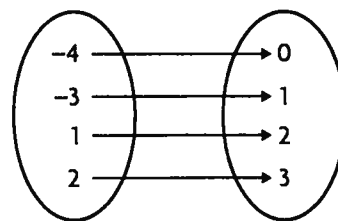
   a)

   b)

   c) $\{(1,4), (1,9), (2,7),$
       $(3,-5), (4,11)\}$

   d) $y = 3x - 5$

   e)

   f) $y = -5x^2$

2. State the domain and range of each relation. Then determine whether the relation is a function, and justify your answer.

   a) $y = -2(x+1)^2 - 3$ c) $y = 2^{-x}$ e) $x^2 + y^2 = 9$

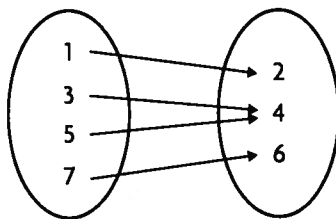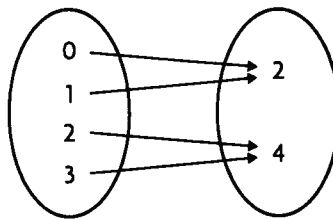   b) $y = \dfrac{1}{x+3}$ d) $y = \cos x + 1$ f) $y = 2 \sin x$

PRACTISING

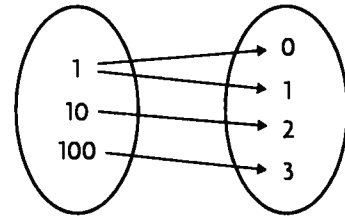3. Determine whether each relation is a function, and state its domain and range.

   a)

   c)

   e)

   b) $\{(2,3), (1,3), (5,6),$
       $(0,-1)\}$

   d) $\{(2,5), (6,1), (2,7),$
       $(8,3)\}$

   f) $\{(1,2), (2,1), (3,4),$
       $(4,3)\}$