

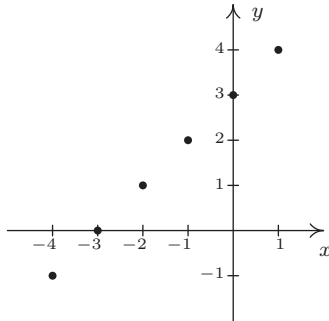
1.4.1 EXERCISES

1. Determine which of the following relations represent y as a function of x . Find the domain and range of those relations which are functions.

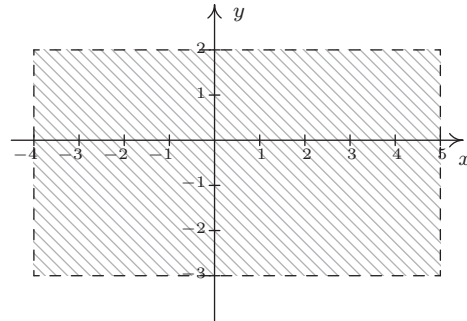
- (a) $\{(-3, 9), (-2, 4), (-1, 1), (0, 0), (1, 1), (2, 4), (3, 9)\}$
 (b) $\{(-3, 0), (1, 6), (2, -3), (4, 2), (-5, 6), (4, -9), (6, 2)\}$
 (c) $\{(-3, 0), (-7, 6), (5, 5), (6, 4), (4, 9), (3, 0)\}$
 (d) $\{(1, 2), (4, 4), (9, 6), (16, 8), (25, 10), (36, 12), \dots\}$
 (e) $\{(x, y) : x \text{ is an odd integer, and } y \text{ is an even integer}\}$
 (f) $\{(x, 1) : x \text{ is an irrational number}\}$
 (g) $\{(1, 0), (2, 1), (4, 2), (8, 3), (16, 4), (32, 5), \dots\}$
 (h) $\{\dots, (-3, 9), (-2, 4), (-1, 1), (0, 0), (1, 1), (2, 4), (3, 9), \dots\}$
 (i) $\{(-2, y) : -3 < y < 4\}$
 (j) $\{(x, 3) : -2 \leq x < 4\}$

2. Determine which of the following relations represent y as a function of x . Find the domain and range of those relations which are functions.

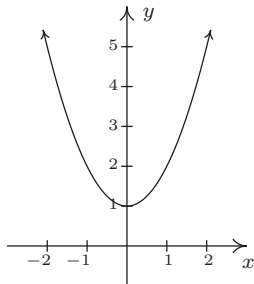
(a)



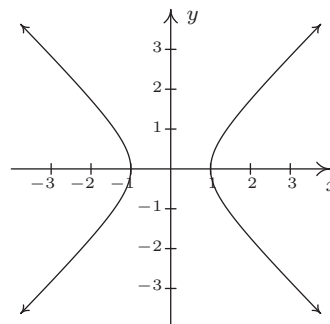
(b)



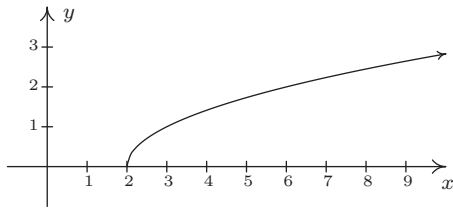
(c)



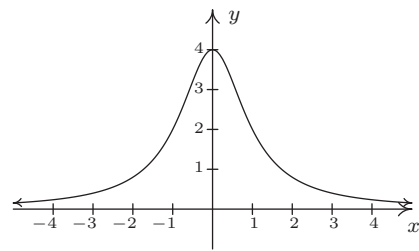
(d)



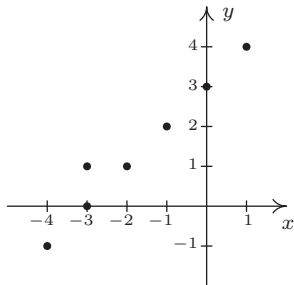
(e)



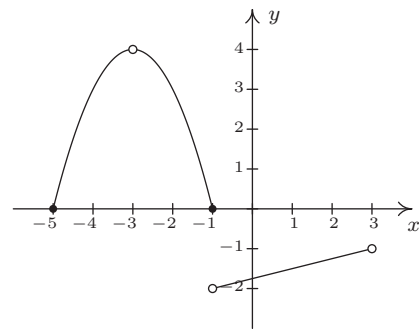
(f)



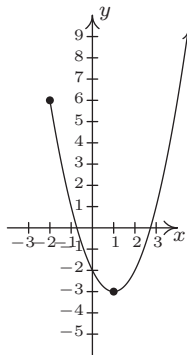
(g)



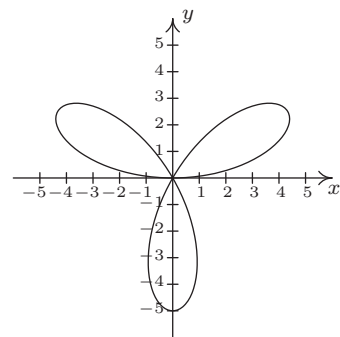
(h)



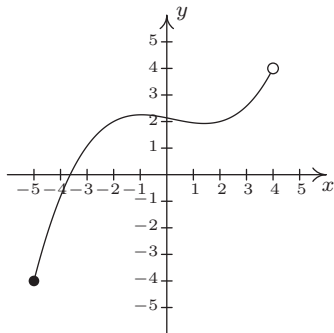
(i)



(j)



(k)



(l)

