

5. For each relation below

i) State its domain and range.

ii) State whether it is a function. If necessary, draw a graph to find out.

a) $\{(1, 1), (2, 4), (3, 9), (4, 16)\}$

b) $\{(4, 3), (7, 6), (2, 3), (10, 9)\}$

c)

x	y
3	3
3	-3
6	-6
6	6
0	0

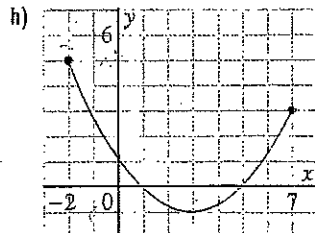
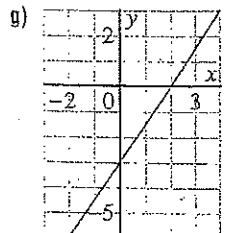
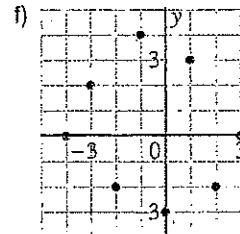
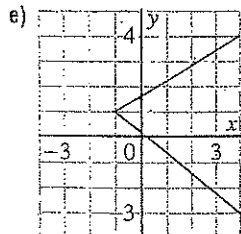
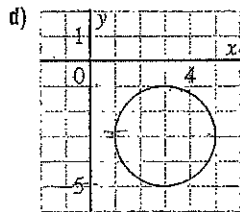
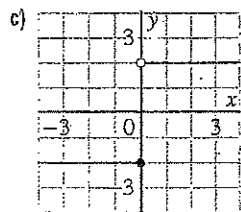
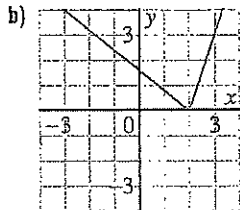
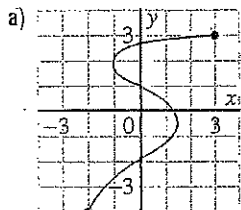
d)

x	y
1	2
2	4
3	6
5	6
8	10

6. For each relation below

i) State its domain and range.

ii) State whether it is a function.



Answers:

- 5. a) i) Domain: $\{1, 2, 3, 4\}$, range: $\{1, 4, 9, 16\}$ ii) Function
- b) i) Domain: $\{2, 4, 7, 10\}$, range: $\{3, 6, 9\}$ ii) Function
- c) i) Domain: $\{0, 3, 6\}$, range: $\{-6, -3, 0, 3, 6\}$ ii) Not a function
- d) i) Domain: $\{1, 2, 3, 5, 8\}$, range: $\{2, 4, 6, 10\}$ ii) Function
- 6. a) i) Domain: $-2 \leq x \leq 3$, range: $-4 \leq y \leq 3$ ii) Not a function
- b) i) Domain: all real numbers, range: $y \geq 0$ ii) Function
- c) i) Domain: all real numbers, range: $[-2, 2]$ ii) Function
- d) i) Domain: $1 \leq x \leq 5$, range: $-5 \leq y \leq -1$ ii) Not a function
- e) i) Domain: $x \geq -1$, range: all real numbers ii) Not a function
- f) i) Domain: $\{-4, -3, -2, -1, 0, 1, 2, 3\}$, range: $\{-3, -2, 0, 2, 3, 4\}$ ii) Function
- g) i) Domain: all real numbers, range: all real numbers ii) Function
- h) i) Domain: $-2 \leq x \leq 7$, range: $-1 \leq y \leq 5$ ii) Function

