

ASSIGNMENT

1 Which of the followings are well-defined sets?

a) Well-defined set

b) Well-defined set

c) Ill-defined set

d) Well-defined set

e) Ill-defined set

f) Ill-defined set

g) Ill-defined set

h) Well-defined set

i) Well-defined set

2 Let $A = \{a, b, c, d, e, f\}$. Insert appropriate symbols \in or \notin in the blank space.

a) $d \in A$

b) $y \notin A$

c) $m \notin A$

d) $a \in A$

e) $e \in A$

f) $x \notin A$

3 Write the following in set builder form.

a) $A = \{2, 4, 6, 8\}$

$= A = \{x : x \text{ is an even number and } x \leq 8\}$

b) $B = \{3, 9, 27, 81\}$

$= B = \{x : x = 3^n, n \in \mathbb{N}, n \leq 4\}$

c) $C = \{1, 4, 9, 16, 25\}$

~~$= C = \{x : x = n^x, n \in \mathbb{N}, n \leq 5\}$~~

$= C = \{x : x = n^2, n \in \mathbb{N}, n \leq 5\}$

d) $D = \{1, 3, 5, \dots\}$

$= D = \{x : x \text{ is an odd number}\}$

e) $E = \{4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, \dots, 52\}$

$= E = \{x : x \text{ is an even number, } 4 \leq x \leq 52 \text{ and } y = 3(2n+1), 1 \leq x \leq 8\}$

f) $F = \{-10, \dots, -3, -2, -1, 0, 1, 2, \dots, 5\}$

$= F = \{x : x \in \mathbb{W}, -10 \leq x \leq 5\}$

g) $G = \{0\}$

$$= G = \{x : x = 0\}$$

$$n) P = \{ \}$$

$$= P = \emptyset$$