



### Sets Ex 1.2 Q1(ix)

In Roster form, we describe a set by listing its elements, separated by commas and the elements are written within braces  $\{ \}$ . If a set has infinitely many elements, then comma is followed by  $\dots$ , where the dots stand for 'and so on'.

The distinct letters are B, E, T, R.

Hence the set can be written as

$$\{B, E, T, R\}$$

### Sets Ex 1.2 Q2(i)

In set Builder form, a set is described by some characterizing property  $P(x)$  of its elements  $x$ .

In this case a set can be described as  $\{x : P(x) \text{ hold}\}$  or  $\{x | P(x) \text{ holds}\}$  which is read as 'the set of all  $x$  such that  $P(x)$  holds'.

The symbols ':' or '|' is read as 'such that'.

So, the above set  $A$  in Set-Builder form may be written as

$$A = \{x \in N : x < 7\}$$

i.e  $A$  is the set of natural numbers  $x$  such that  $x$  is less than 7.

or

$$A = \{x \in N | 1 \leq x \leq 6\},$$

i.e  $A$  is the set of natural numbers  $x$  such that  $x$  is greater than or equal 1 and less than or equal to 6.

### Sets Ex 1.2 Q2(ii)

In set Builder form, a set is described by some characterizing property  $P(x)$  of its elements  $x$ .

In this case a set can be described as  $\{x : P(x) \text{ hold}\}$  or  $\{x | P(x) \text{ holds}\}$  which is read as 'the set of all  $x$  such that  $P(x)$  holds'.

The symbols ':' or '|' is read as 'such that'.

$$B = \left\{x : x = \frac{1}{n}, n \in N\right\}$$

i.e  $B$  is the set of all those  $x$  such that  $x = \frac{1}{n}$ , where  $n \in N$

### Sets Ex 1.2 Q2(iii)

In set Builder form, a set is described by some characterizing property  $P(x)$  of its elements  $x$ .

In this case a set can be described as  $\{x : P(x) \text{ hold}\}$  or  $\{x | P(x) \text{ holds}\}$  which is read as 'the set of all  $x$  such that  $P(x)$  holds'.

The symbols ':' or '|' is read as 'such that'.

$C = \{x : x = 3k, k \in \mathbb{Z}^+, \text{ the set of positive integers}\},$

i.e  $C$  is the set of multiples of 3 including 0

\*\*\*\*\* END \*\*\*\*\*