

## Self Practice

### 11.2a

- Identify whether each of the following is the universal set of  $\{1, 3, 5, 7, 9, 11, 13, 15\}$ :  
 (a) {whole numbers}  
 (b) {prime numbers}  
 (c)  $\{x : x \text{ is a positive integer and } x \leq 15\}$
- Given that  $\xi = \{\text{whole numbers which are less than } 10\}$ , determine the complement of each of the following sets:  
 (a)  $P = \{\text{multiples of } 3\}$   
 (b)  $Q = \{\text{prime numbers}\}$

[Type Y for yes, N for no]

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|  |
|  |

[Type your answers below in ascending order]

Universal set,  $\xi = \{ \quad , \quad , \quad , \quad , \quad , \quad , \quad , \quad , \quad , \quad , \quad \}$

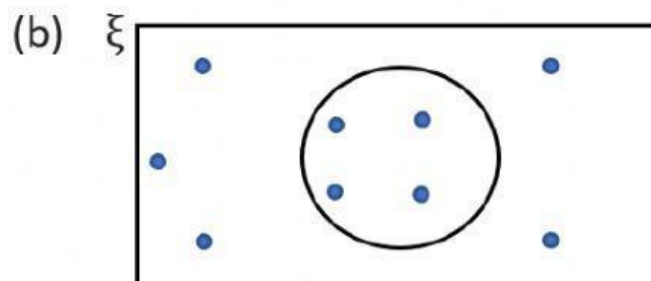
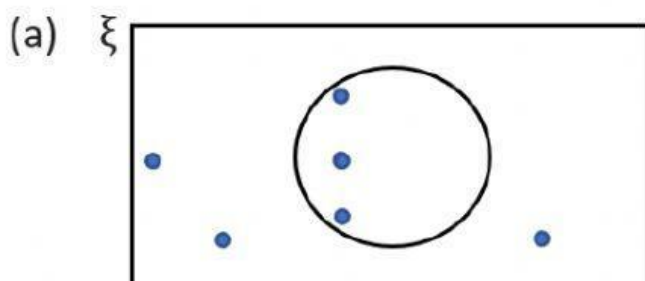
(a)  $P' = \{ \quad , \quad , \quad , \quad , \quad , \quad , \quad \}$

(b)  $Q' = \{ \quad , \quad , \quad , \quad , \quad , \quad \}$

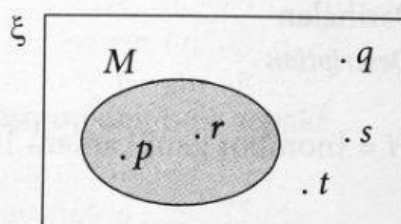
## Self Practice

### 11.2b

- Represent the relationship between the following sets by using the Venn diagram.  
 (a)  $\xi = \{1, 3, 5, 7, 9, 11\}$   
 $A = \{3, 5, 9\}$   
 (b)  $\xi = \{x : x \text{ is an integer and } 10 < x < 20\}$   
 $B = \{\text{prime numbers}\}$



- (c) Gambar rajah Venn berikut menunjukkan set  $M$ .  
 The following Venn diagram shows the set  $M$ .



Berdasarkan gambar rajah Venn itu, lengkapkan setiap pernyataan berikut.

[3 markah]

Based on the Venn diagram, complete the following statements.

[3 marks]

[Type your answers below in alphabetical order]

Jawapan/Answer:

(i)  $\xi = \{ \quad \}$

(ii)  $n(M) = \quad$

(iii)  $M' = \{ \quad \}$

**Self Practice****11.2c**

1. Complete each of the following with the symbol  $\subset$  or  $\not\subset$ .

(a)  $A = \{a, u\}$  and  $B = \{a, e, i, o, u\}$

$A$    $B$

(b)  $E = \{\text{multiples of 4}\}$  and  $F = \{\text{positive integers which are divisible by 2}\}$

$E$    $F$

(c)  $M = \{\text{odd numbers which are less than 50}\}$  and

$N = \{\text{multiples of 5 which are less than 50}\}$

$N$    $M$

(d)  $P = \{\text{quadrilaterals}\}$  and  $Q = \{\text{rectangle, rhombus, pentagon}\}$

$Q$    $P$

2. List all the possible subsets of each of the following sets.

(a)  $\{p, q\}$

(b)  $\{\text{prime numbers which are less than 10}\}$

[Type your answers below in alphabetical order / ascending order]

(a)  $\emptyset, \{ \quad \}, \{ \quad \}, \{ \quad, \quad \}$

(b)  $\emptyset, \{2\}, \{3\}, \{5\}, \{2, 3\}, \{2, 5\}, \{3, 5\}, \{2, 3, 5\}$

**Self Practice****11.2d**

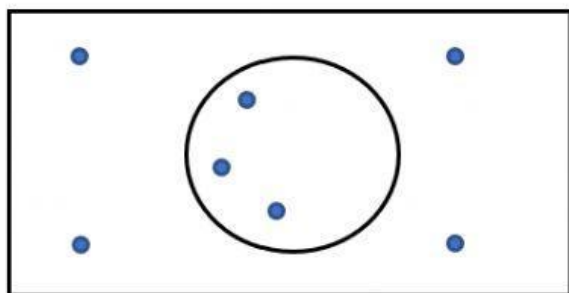
1. Represent the relationship of each of the following pairs of sets, using Venn diagrams.

(a)  $A = \{10, 20, 30, 40, 50, 60, 70\}$  and  $B = \{20, 40, 60\}$

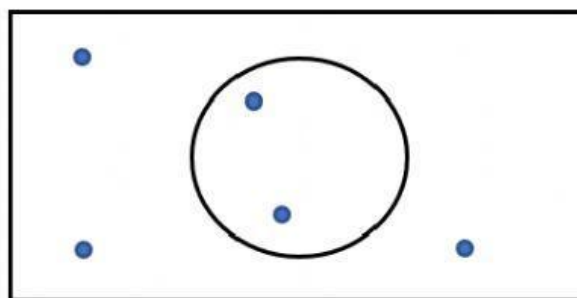
(b)  $M = \{\text{letters in the word 'BIJAK'}\}$  and

$N = \{\text{vowels in the word 'BIJAK'}\}$

(a)



(b)



**Self Practice 11.2e**

1. Represent the relationship between the following sets, using a Venn diagram.

$$\xi = \{a, b, c, d, e, f, g, h\}$$

$$P = \{a, b, c, d\}$$

$$Q = \{b\}$$

$$R = \{f, g\}$$

 $\xi$ 