

Self Practice 11.2a

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

[Type Y for yes, N for no]

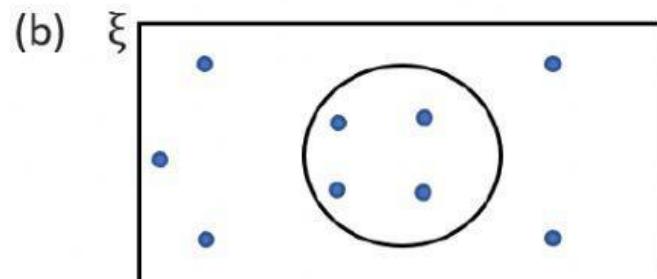
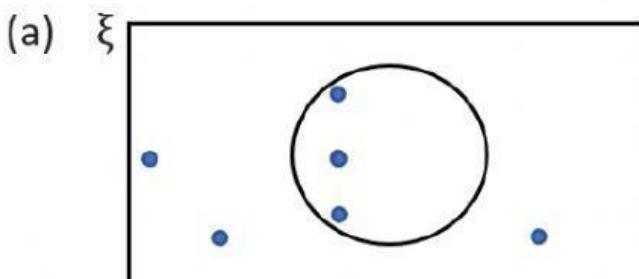
[Type your answers below in ascending order]

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

- $P' = \{ \quad, \quad, \quad, \quad, \quad, \quad, \quad, \quad \}$
- $Q' = \{ \quad, \quad, \quad, \quad, \quad, \quad, \quad \}$

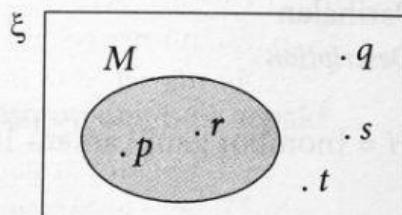
Self Practice 11.2b

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



(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:

- $\xi = \{ \quad, \quad, \quad, \quad, \quad, \quad, \quad, \quad \}$
- $n(M) = \quad$
- $M' = \{ \quad, \quad, \quad, \quad, \quad, \quad, \quad, \quad \}$

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) $\emptyset, \{2\}, \{2\}, \{2, \quad\}, \{3, \quad\}, \{3, \quad\}, \{5, \quad\}, \{2, 3, \quad\}, \{2, 3, \quad\}, \{3, 5, \quad\},$
 $\{\quad, \quad, \quad, \quad\}, \{\quad\}, \{\quad\}, \{\quad\}, \{\quad\},$

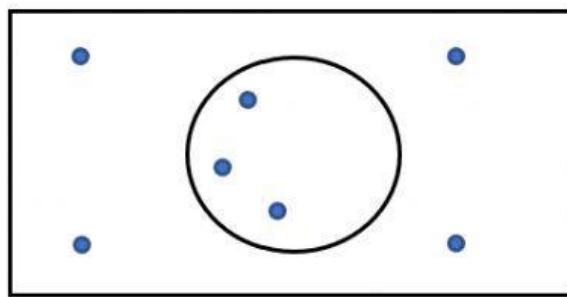
Self Practice 11.2d

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

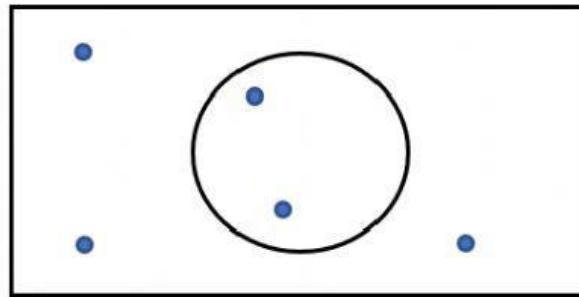
(a) $A = \{10, 20, 30, 40, 50, 60, 70\}$ and $B = \{20, 40, 60\}$

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

(a)



(b)



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

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

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

$Q = \{b\}$

$R = \{f, g\}$

