



1.	Warna Colour	Poligon Polygon	Pengangkutan Transportation
	Kuning Yellow	Pentagon Pentagon	Kereta Car
	Hijau Green	Heptagon Heptagon	Lori Lorry
	Merah Red	Segi tiga Triangle	Bas Bus
	Ungu Purple	Oktagon Octagon	Beca Trishaw
	Biru Blue	Heksagon Hexagon	Basikal Bicycle

2. (a)	(i) Perihalan Description	P ialah set yang terdiri daripada huruf dalam perkataan 'SEJAHTERA'. P is the set of the letters in the word 'SEJAHTERA'.
	(ii) Penyenaraian Listing	$P = \{S, E, J, A, H, T, R\}$
	(iii) Tatatanda pembina set Set builder notation	$P = \{x : x \text{ ialah huruf dalam perkataan 'SEJAHTERA'}\}$ $P = \{x : x \text{ is a letter in the word 'SEJAHTERA'}\}$
(b)	(i) Perihalan Description	S ialah set yang terdiri daripada nombor genap antara 10 dengan 20. S is the set of the even numbers between 10 and 20.
	(ii) Penyenaraian Listing	$S = \{12, 14, 16, 18\}$
	(iii) Tatatanda pembina set Set builder notation	$S = \{x : x \text{ ialah nombor genap dan } 10 < x < 20\}$ $S = \{x : x \text{ is an even number and } 10 < x < 20\}$

3. (a) ϕ
(c) ϕ
(d) ϕ

4. (a)	$J = \{\text{alat-alat tulis}\}$ $J = \{\text{stationeries}\}$
	Pen $\in J$ Pemadam $\in J$ Cermin mata $\notin J$ Pen Eraser Spectacles
(b)	$K = \{x : x \text{ ialah gandaan } 6\}$ $K = \{x : x \text{ is a multiple of } 6\}$
	12 $\in K$ 76 $\notin K$ 128 $\notin K$

5. (a) $n(Q) = 4$
(b) $R = \{M, L, Y, S\}$
 $n(R) = 4$
(c) $S = \{4, 8, 12, 16, 20, 24, 28\}$
 $n(S) = 7$

- (d) $T = \{3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23\}$
 $n(T) = 11$
- (e) $U = \{1, 2, 4, 5, 10, 20\}$
 $n(U) = 6$

6. (a) Benar / True

(b) Palsu / False

(c) Palsu / False

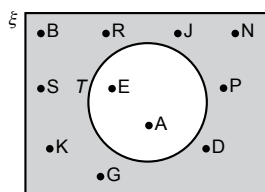
7. (a) {Huruf dalam perkataan 'SEJAHTERA'} ☒
 {Letters in the word 'SEJAHTERA'}

(b) {Gandaan bagi 2} ☒
 {Multiples of 2}

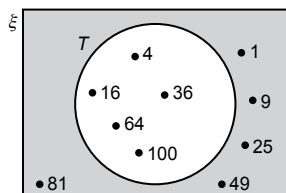
8. (a) $\xi = \{2, 4, 6, 8, 10, 12, 14, 16\}$
 $P = \{4, 8, 12, 16\}$
 $\therefore P' = \{2, 6, 10, 14\}$

(b) $\xi = \{1, 2, 4, 8, 16, 32\}$
 $Q = \{1\}$
 $\therefore Q' = \{2, 4, 8, 16, 32\}$

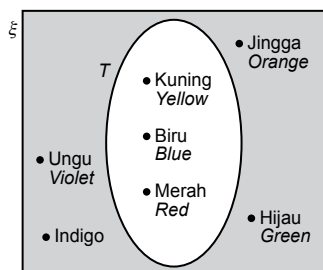
9. (a) $\xi = \{B, E, R, J, A, S, K, P, D, N, G\}$
 $T = \{E, A\}$



(b) $\xi = \{1, 4, 9, 16, 25, 36, 49, 64, 81, 100\}$
 $T = \{4, 16, 36, 64, 100\}$

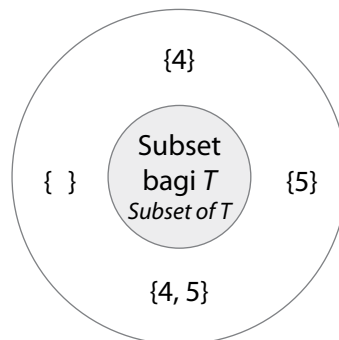


(c) $\xi = \{\text{merah, jingga, kuning, hijau, biru, indigo, ungu}\}$
 $\xi = \{\text{red, orange, yellow, green, blue, indigo, violet}\}$

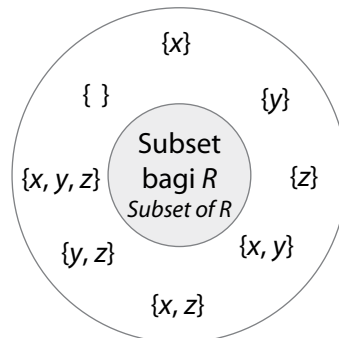


10. (a) ✓
 (b) ✗
 (c) ✓

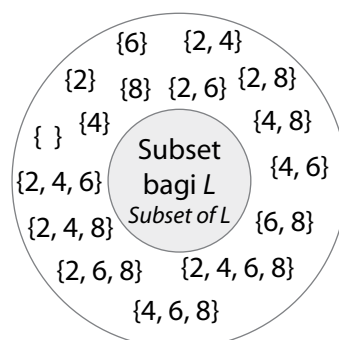
11. (a)



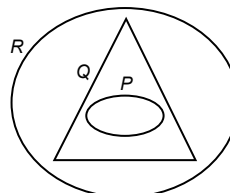
(b)



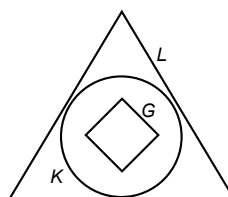
(c)



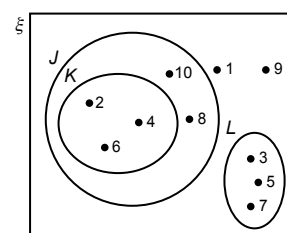
12. (a)



(b)

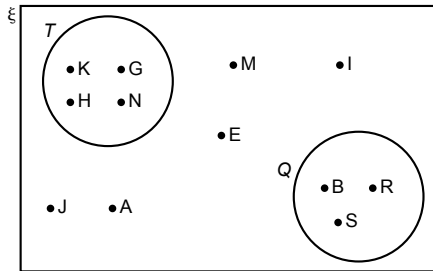


13. $\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$
 $J = \{2, 4, 6, 8, 10\}$
 $K = \{2, 4, 6\}$
 $L = \{3, 5, 7\}$

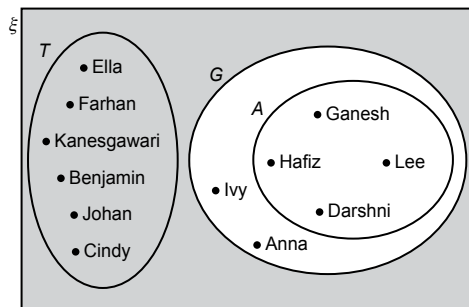


14. (a) (i) $L' \subset M'$
(ii) $N \subset M'$
(b) (i) $A \not\subset B$
(ii) $B' \subset C'$

15. (a) $\xi = \{M, E, N, J, A, G, K, B, R, S, I, H\}$
 $T = \{K, G, H, N\}$
 $Q = \{B, R, S\}$
 $T' = \{M, E, J, A, I, B, R, S\}$
Maka / Hence, $T' \neq Q$



- (b) (i) (i), (ii) Katakan / Let
 $A = \{\text{Ahli persatuan Aktuari}\}$
 $A = \{\text{Members of Actuary}\}$
 $G = \{\text{Ahli persatuan Matematik Gunaan}\}$
 $G = \{\text{Members of Applied Mathematics}\}$
 $T = \{\text{Ahli persatuan Matematik Tulen}\}$
 $T = \{\text{Members of Pure Mathematics}\}$



(iii) $A \subset G$

16. Aktiviti PAK-21

Praktis Masteri 11

BAHAGIAN A

- Unsur bagi $\{1, 2\}$ ialah 1, 2.
Elements of $\{1, 2\}$ are 1, 2.
Jawapan / Answer: **A**
- A:** 0.2 bukan integer.
0.2 is not an integer.
B: 1 bukan nombor perdana.
1 is not a prime number.
C: 16 bukan nombor kuasa tiga sempurna.
16 is not a perfect cube.
Jawapan / Answer: **D**
- Jawapan / Answer: **B**

4. $\xi = \{16, 17, 18, 19, 20\}$
 $N = \{18\}$
Pelengkap bagi N , $N' = \{16, 17, 19, 20\}$
Compliment of N , $N' = \{16, 17, 19, 20\}$
Jawapan / Answer: **C**

5. $T' = \{h, g, i, j\}$
Jawapan / Answer: **D**
6. Bilangan unsur bagi $\{p, q, r, s\}$
The number of elements of $\{p, q, r, s\}$
 $= 4$

Bilangan subset
The number of subset
 $= 4^2$
 $= 16$

Jawapan / Answer: **B**

7. Jawapan / Answer: **A**

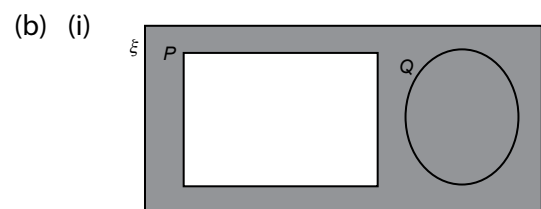
BAHAGIAN B

8.

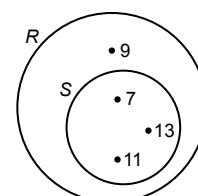
1	4	8	11	12	13	18	20
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9. (a) $G = \phi$
(b) $F \subset E$
(c) $16 \notin E$
(d) $\{2, 4, 6, 8, 10, 12, 14, 16, 18, 20\} = \xi$

BAHAGIAN C

10. (a) (i) $n(K) = 4$
(ii) $L = \{\text{April, Jun, September, November}\}$
 $L = \{\text{April, June, September, November}\}$
 $n(L) = 4$
(iii) $M = \{-8, -7, -6, -5, -4, -3, -2, -1\}$
 $n(M) = 8$



- (ii) (a) $R = \{7, 9, 11, 13\}$
 $S = \{7, 11, 13\}$



- (b) $S' = \{9\}$

(c) $G = \{11, 13, 15, 17, 19\}$
 $H = \{2p, 13, 5q, 17, 19\}$
 $2p = 11$
 $p = 5.5$
 $5q = 15$
 $q = 3$

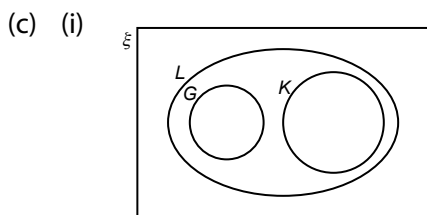
11. (a) (i) K ialah set nombor kuasa tiga sempurna antara 1 dan 100.
K is the set of perfect cubes between 1 and 100.

(ii) $K = \{8, 27, 64\}$

(iii) $K = \{x : x \text{ ialah nombor kuasa tiga sempurna dan } 1 < x < 100\}$
 $K = \{x : x \text{ is a perfect cube and } 1 < x < 100\}$

(b) (i) Set N ialah subset bagi set M .
Set N is the subset of set M .

(ii) Kawasan yang berlorek mewakili M' .
The shaded region represents M' .



(ii) (a) $M = \{K, E, J, A, Y, N\}$
 $N = \{J, A, Y\}$

(b) Ya. Setiap unsur dalam set N ada dalam set M . Maka, $N \subset M$.
Yes. Each element in set N is in set M . Thus, $N \subset M$.

Fokus KBAT

(a) $B = T$
 $\{5, y\} = \{\sqrt{5 \times 5}, \sqrt{7 \times 7}\}$
 $\{5, y\} = \{5, 7\}$

Maka / Hence,
 $y = 7$

(b) $A = \{2, 3, 5, 7, 11, 13, 17, 19, 23\}$
Maka / Hence
 $A = \{x : 2 \leq x \leq 23, x \text{ ialah nombor perdana}\}$
 $A = \{x : 2 \leq x \leq 23, x \text{ is a prime number}\}$

(c) $B \subset A$

(d) $B' = \{2, 3, 4, 10, 11, 13, 17, 19, 23, 37\}$