TINGKATAN 5
MATH EXTRA
CIKGU LOKMAN

TINGKATAN 5				
BIL	BAB	TOPIC	DATE	REMARKS
1	BAB 1	UBAHAN		
2	BAB 2	MATRIKS		
3	BAB 3	MATEMATIK PENGGUNA INSURANS		
4	BAB 4	MATEMATIK PENGGUNA PERCUKAIAN		
5	BAB 5	KEKONGRUENAN , PEMBESARAN DAN GABUNGAN TRANSFORMASI		
6	BAB 6	NISBAH DAN GRAF FUNGSI TRIGOMETRI		
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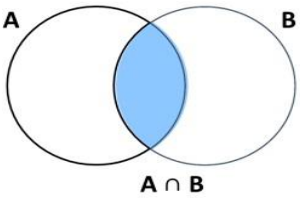
8	BAB 8	PEMODELAN MATEMATIK		

BAB 4: OPERASI SET
CHAPTER 4: OPERATIONS ON SET

4.1

PERSILANGAN SET

(∩)

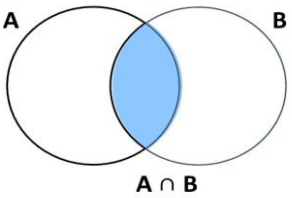


SET A DAN SET B MEMPUNYAI UNSUR YANG SEPUNYA.

4.1

INTERSECTION OF SETS

(∩)

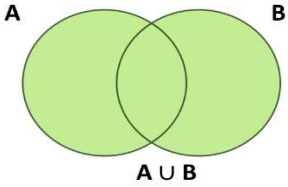


SET A AND SET B CONTAINS COMMON ELEMENTS.

4.2

KESATUAN SET

(∪)

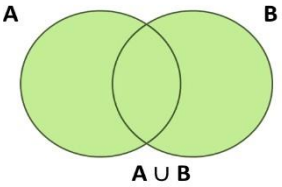


A ∪ B MEWAKILI SEMUA UNSUR DALAM SET A, SET B ATAU KEDUA-DUA SET A ATAU SET B.

4.2

UNION OF SETS

(∪)

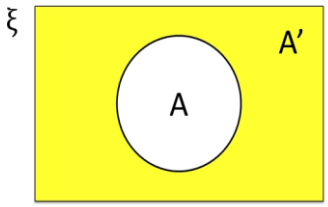


A ∪ B REPRESENTS ALL THE ELEMENTS IN SET A OR SET B OR IN BOTH SETS A AND B.

4.3

PELENGKAP BAGI SET A

(A')

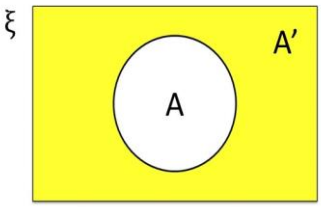


PELENGKAP BAGI SET A IALAH SEMUA UNSUR YANG BUKAN UNSUR A.

4.3

THE COMPLEMENT OF SET A

(A')



THE COMPLEMENT OF SET A REFERS TO ALL THE ELEMENTS NOT IN SET A.

BAHAGIAN A
SECTION A

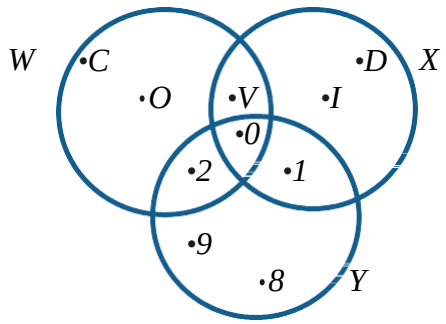
1. X = {huruf dalam perkataan 'SUKAURIAN'}
   Y = {huruf dalam perkataan 'CEMERLANG'}
   Senaraikan semua unsur dan bilangan unsur bagi set di bawah
   a. $X \cap Y$ dan $n(X \cap Y)$ [2 Markah]
   b. X dan $n(Y)$ [2 Markah]

   X = { *letters in word* 'SUKAURIAN'}
   Y = { *letters in word* 'CEMERLANG'}
   List all the elements and the number of elements for the set below
   a. $X \cap Y$ and $n(X \cap Y)$ [2 *Marks*]
   b. Y and $n(Y)$ [2 *Marks*]

   Jawapan / *Answer*:
   (a)

   (b)

2. Gambar rajah Venn menunjukkan set W, set X dan set Y dengan keadaan set semesta ξ = { C, D, I, O, V, 0, 1, 2, 8, 9 }.
   The Venn diagram shows the set W, set X and set Y such that the universal set ξ = {C, D, I, O, V, 0, 1, 2, 8, 9}.



   Senaraikan semua unsur bagi set berikut
   List all the elements of the following set

   a. $W \cup Y$ [1 Markah / *mark*]
   b. $W \cap X$ [1 Markah / *mark*]
   c. $X \cap Y$ [1 Markah / *mark*]
   d. $X' \cap Y$ [1 Markah / *mark*]

Jawapan / *Answer*:

(a)

(b)

(c)

(d)

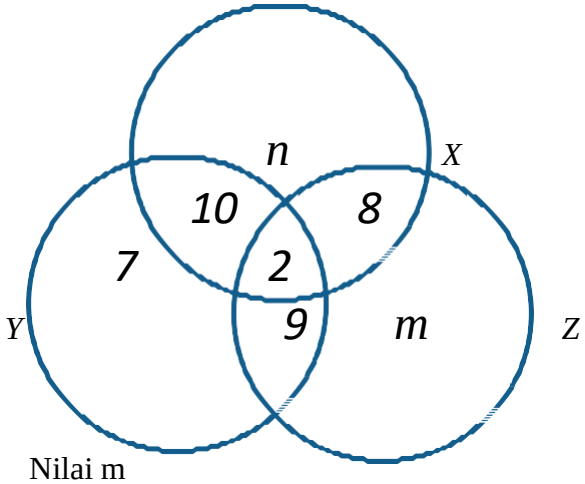
3. Sebanyak 150 orang membeli-belah di sebuah kedai sukan. 100 orang membeli raket dan 25 orang membeli kasut sukan manakala 30 orang lagi tidak membeli kedua-dua raket dan kasut sukan.
   i. Lukis Rajah Venn untuk menunjukkan hubungan pernyataan di atas.
   [2 markah]
   ii. Berapa orang yang membeli kedua-dua raket dan kasut sukan?
   [2 Markah]

   A total of 150 *people shop at a sports shop.* 100 *people bought rackets and* 25 *people bought sports shoes while another* 30 *people did not buy both racquets and sports shoes.*
   i. Draw a Venn diagram to show the relationship of the above statement.
   [*2 marks*]
   ii. *How many people buy both racquets and sports shoes?* [2 *marks*]

   Jawapan / *Answer*:
   (i)

   (ii)

4. Gambar rajah Venn di atas menunjukkan bilangan peserta merentas desa yang menyertai larian di tiga buah daerah. Diberi set semesta ξ = { X U Y U Z } dengan keadaan set X = { Lahad Datu }, set Y = { Kinabatangan } dan set Z = { Sandakan }. Diberi $n(\xi)$ = 54 dan bilangan peserta di daerah Sandakan adalah 5 orang lebih daripada bilangan peserta di daerah Kinabatangan. Cari
The Venn diagram above shows the number of cross-country participants participating in the run in the three districts. Given the universal set ξ = {X ∪ Y ∪ Z} with the conditions set X = {Lahad Datu}, set Y = {Kinabatangan} and set Z = {Sandakan}. Given $n(\xi)$ = 54 and the number of participants in Sandakan district is 5 *people more than the number of participants in Kinabatangan district. Look for*



a. Nilai m [1 Markah]
b. Nilai n [1 Markah]
c. Bilangan peserta yang tidak menyertai merentas desa di Lahad Datu dan Kinabatangan. [2 Markah]

a. *The value of m* [1 mark]
b. *The value of n* [*1 mark*]
c. *Number of participants who did not participate cross-country in Lahad Datu and Kinabatangan.* [2 *marks*]

Jawapan / *Answer*:
(a)

(b)

(c)

BAHAGIAN B
SECTION B

1. Diberi $\xi = \{11 \leq x \leq 20\}$ di mana set $W = \{ 13,14,15,17,18 \}$, set $X = \{ 12, 13, 15, 17, 19 \}$ dan set $Y = \{ 11, 12, 13, 14, 20 \}$. Cari
   a. $W \cap X$ [1 Markah]
   b. $W \cap Y$ [1 Markah]
   c. $X \cap Y$ [1 Markah]
   d. $W \cap X \cap Y$ [1 Markah]
   e. Lukis Rajah Venn yang mewakili hubungan W U X U Y [2 Markah]
   f. Berdasarkan rajah Venn, cari Set W' [1 Markah]

   It is given $\xi = \{11 \leq x \leq 20\}$ *where set* $W = \{13,14,15,17,18\}$, *set* $X = \{12, 13, 15, 17, 19\}$ *and set* $Y = \{11, 12 , 13, 14, 20\}$. *Find*
   a. $W \cap X$ [1 *Mark*]
   b. $W \cap Y$ [1 *Mark*]
   c. $X \cap Y$ [1 *Mark*]
   d. $W \cap X \cap Y$ [1 *Mark*]
   e. *Draw a Venn diagram representing the relationship* W U X U Y [2 *Marks*]
   f. *From the Venn diagram, find the set of* W' [1 *Mark*]

   Jawapan / *Answer*:
   (a)

   (b)

   (c)

   (d)

   (e)

   (f)

2. Dalam sekumpulan murid seramai 80 orang, 55 orang mempunyai telefon bimbit, 60 orang mempunyai laptop dan 10 orang tidak mempunyai kedua-dua telefon bimbit dan laptop. Cari berapa orang murid yang mempunyai
   a. Kedua-dua telefon dan laptop [3 Markah]
   b. Laptop sahaja [1 Markah]
   c. Lukis gambar rajah Venn tentang hubungan di atas [1 Markah]

   In a group of 80 students, 55 had mobile phones, 60 had laptops and 10 people did not have both mobile phones and laptops. Find out how many students have
   a. *Both phone and laptop* [3 Marks]
   b. *Laptop only* [1 Mark]
   c. *Draw a Venn diagram of the above relationship* [1 Mark]
   Jawapan / *Answer*:
   (a)

   (b)

   (c)

3. Di dalam sebuah kelas seramai 35 orang murid, 8 orang menyukai subjek Matematik dan 18 orang menyukai subjek Sains manakala 3 orang menyukai kedua-dua subjek Matematik dan Sains.
   a. Lukis rajah Venn berdasarkan pernyataan di atas [2 Markah]
   b. Cari jumlah murid yang tidak menyukai kedua-dua subjek Matematik dan Sains. [1 Markah]
   c. Cari jumlah murid yang hanya menyukai 1 subjek sahaja. [2 Markah]

   In a class of 35 *students,* 8 *people liked Mathematics subject and* 18 *people liked Science subject while* 3 *people liked both of Mathematics and Science subject.*
   a. *Draw a Venn diagram based on the above statement* [2 *Marks*]
   b. *Find the number of students who did not like both Mathematics and Science subject.* [1 *Mark*]
   c. *Find the number of students who only liked 1 subject.* [2 *Marks*]

Jawapan / *Answer*:

(a)

(b)

(c)

NOTES: