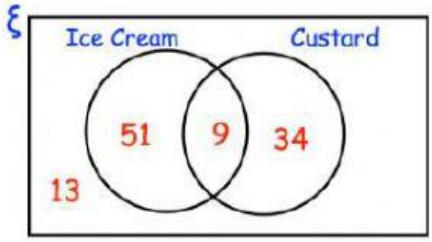
G10. Quiz#1. Sets and Venn diagrams

1. At a wedding, the guests may have ice cream or custard with their dessert.
The Venn diagram shows information about the choices the guests made.



(a) How many guests had custard?

.....

(1)

(b) How many guests had ice cream and custard?

.....

(1)

(c) How many guests went to the wedding?

.....

(1)

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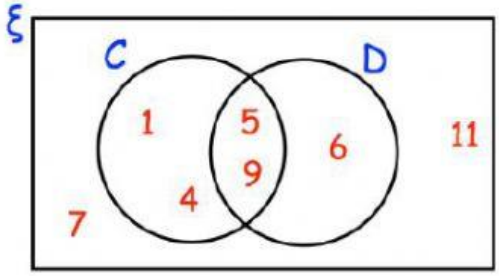
2. Here is a Venn diagram



Write down the numbers that are in set

(a) D

.....

(1)

(b) C ∪ D

.....

(1)

(c) C'

.....

(1)

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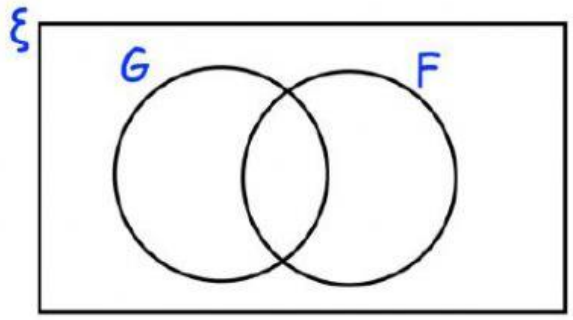
3. There are 80 students in year 11.

9 students study French and German.
35 students only study French
2 students do not study French or German.

(a) Complete the Venn diagram



(2)

(b) Work out how many students study only German.

.....

(1)

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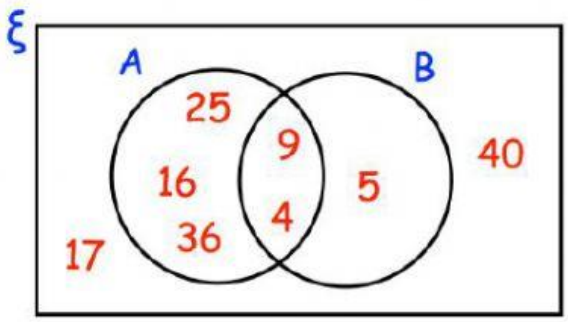
4 Suppose A is the set of all factors of 24 and B is the set of all factors of 18. Find:

a $A \cap B$ **b** $A \cup B$.

a) **b)**

5. Here is a Venn diagram.



Write down the numbers that are in set

(a) A ∩ B

.....

(1)

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(b) A ∪ B

.....

(1)

(c) A'

.....

(1)

6 Suppose $U = \{x \mid 12 \leqslant x \leqslant 20,\ x \in \mathbb{Z}\}$, $A = \{12, 14, 16, 18\}$, and $B = \{12, 15, 18\}$.
List the elements of:
i U **ii** A' **iii** B' **iv** $A \cup B$ **v** $A' \cap B'$.

i)

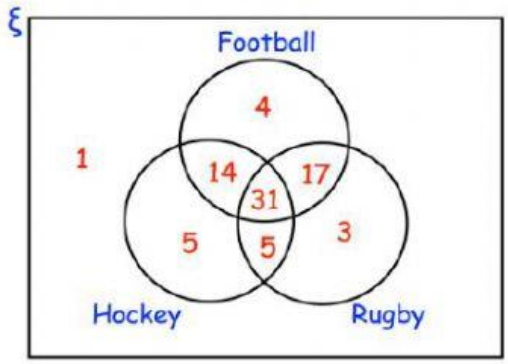
ii)

iii)

iv)

v)

7. Jennifer asked 80 people which sports they enjoy from Football, Hockey and Rugby.



(a) How many people enjoy all three sports?

.....

(1)

(b) How many people enjoy football and hockey but not rugby?

.....

(2)

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