

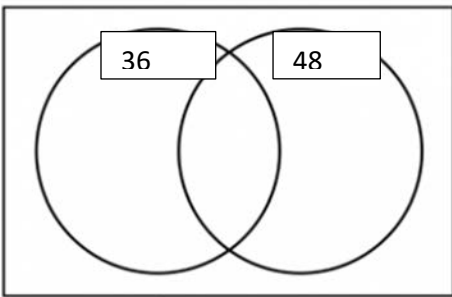
GCSE - Numeracy and Mathematics
Topic: Venn Diagram

Tier: Intermediate

Grade:
E/D/C

Starter
 Write 180 as a product of prime numbers in index form:

Skills:
 1) If $36 = 2 \times 3^2$ and $48 = 2^4 \times 3$

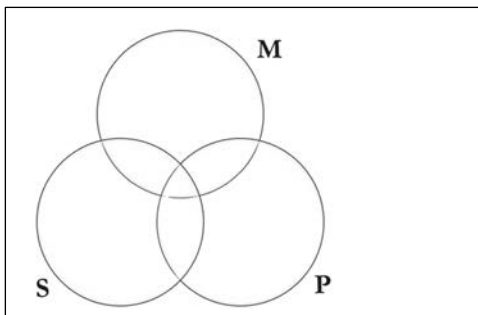


Label and fill the diagram and use the information to calculate the highest common factor and least common multiple of 36 and 48.

HCF = LCM=

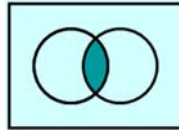
2) Place all the numbers from 12 to 16 in the Venn diagram where:

- M are multiples of 2
- P are multiples of 3
- S are prime numbers

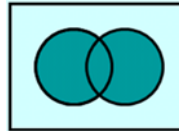


Top Tips!

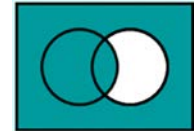
Let $\begin{matrix} A \\ \square \end{matrix}$ to $\begin{matrix} B \\ \square \end{matrix}$ be Venn diagram notation



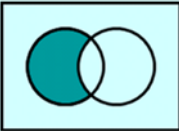
$P(A \cap B)$



$P(A \cup B)$



$P(A \cup B')$



$P(A \cap B')$

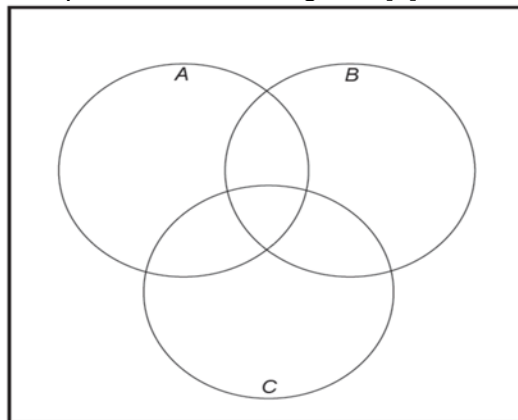
2014 January Link - Methods U1 Higher Qu 5

The universal set, $\epsilon = \{22, 23, 24, 25, 26, 27, 28, 29, 30\}$.

Within this universal set ϵ ,

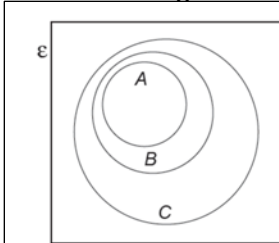
- set A is the multiples of 2
- set B is the multiples of 4
- set C is the multiples of 5

(a) Complete the Venn diagram. [3]

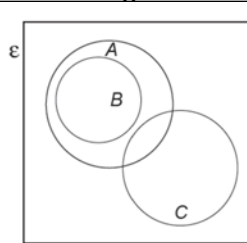


(b) Which one of the following Venn diagrams could also be used to represent the sets ϵ , A, B and C? You must give a reason for your choice. [2]

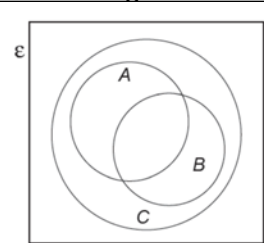
Venn Diagram 1



Venn Diagram 2



Venn Diagram 3



Assessment for Learning

Video / QR code

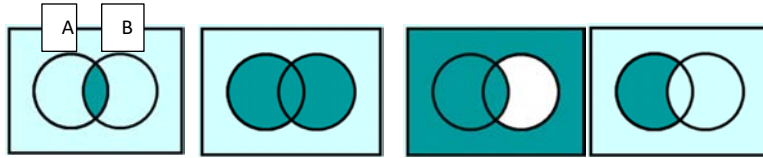
GCSE - Numeracy and Mathematics
Topic: Venn Diagram

Tier: Intermediate

Grade: E/D/C

Starter
 Write 180 as a product of prime numbers in index form:
 $180 = 2 \times 2 \times 3 \times 3 \times 5$
 $= 2^2 \times 3^2 \times 5$

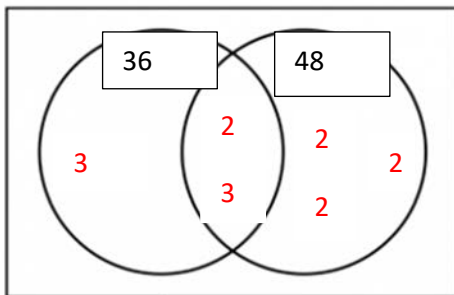
Top Tips!
 Learn to use Venn diagram notation



$P(A \cap B)$ $P(A \cup B)$ $P(A \cup B')$ $P(A \cap B')$

Skills:

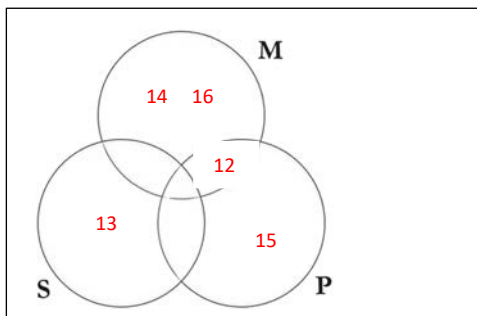
1) If $36 = 2 \times 3^2$ and $48 = 2^4 \times 3$



Label and fill the diagram and use the information to calculate the highest common factor and least common multiple of 36 and 48.

HCF = 6 LCM = 144

2) Place all the numbers from 12 to 16 in the Venn diagram where:
 - M are multiples of 2
 - P are multiples of 3
 - S are prime numbers



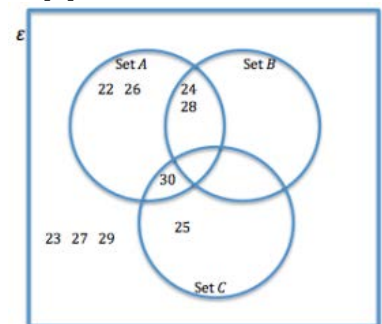
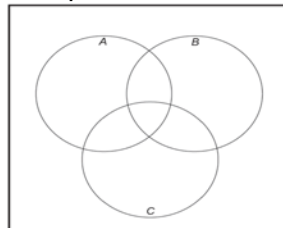
Examination Question:

2014 January Link - Methods U1 Higher Qu 5

The universal set, $\epsilon = \{22, 23, 24, 25, 26, 27, 28, 29, 30\}$.

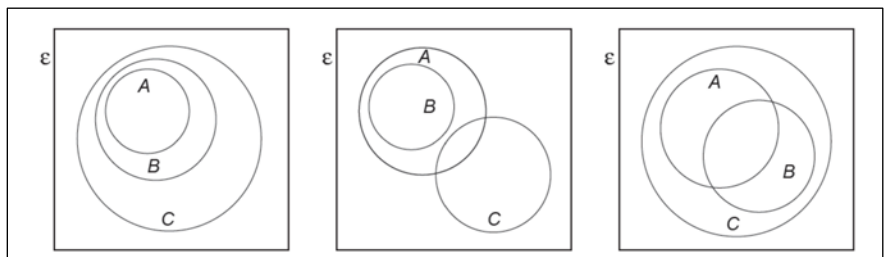
- Within this universal set ϵ ,
- set A is the multiples of 2
 - set B is the multiples of 4
 - set C is the multiples of 5

(c) Complete the Venn diagram. [3]



(d) Which one of the following Venn diagrams could also be used to represent the sets ϵ , A, B and C? You must give a reason for your choice. [2]

Venn Diagram 1 Venn Diagram 2 Venn Diagram 3



Venn diagram 2 AND full reason, e.g. 'multiples of 4 are a subset of multiples of 2 and there is a multiple of 2 which is a multiple of 5', or 'set B is a subset of set A, and set A intersects with set C', or 'A & B share some of the numbers, but C only shares numbers with A', or 'C & B have nothing in common, and B shares everything with A'