

Revision Practice 6

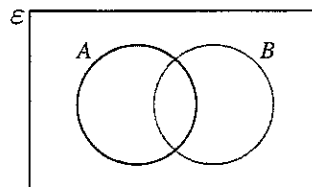


- Suppose a universal set $\varepsilon = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$. If $A = \{x: x \text{ is an even number}\}$ and $B = \{x: x \text{ is a multiple of 3}\}$,
 - list the elements in A ,
 - list the elements in B ,
 - find $A \cap B$,
 - find $A \cup B$.

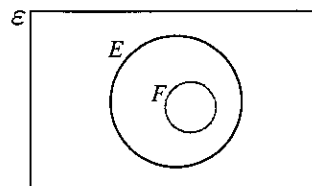
- Let a universal set $\varepsilon = \{\text{red, orange, yellow, green, indigo, blue, purple}\}$, $A = \{\text{red, yellow, blue}\}$ and $B = \{\text{yellow, green}\}$.
 - Find $n(A)$.
 - Find A' .
 - Is B a subset of A ?

- Let $E = \{\text{magnesium, iron, zinc, gold}\}$ and $F = \{\text{gold, silver, iron}\}$.
 - Suggest a universal set that contains the two sets E and F .
 - Find $E \cap F$.
 - List all the possible subsets of $E \cap F$.

- Copy the Venn diagram and shade the region that represents
 - $A \cap B$,
 - $A \cup B'$.



- Refer to the Venn diagram.
 - State the relationship between the sets E and F .
 - Find $E \cup F$ and $E \cap F$.
 - Copy the Venn diagram and shade the region that represents $E \cap F$.



- Let $A = \begin{pmatrix} 2 & 3 \\ -6 & 0 \end{pmatrix}$, $B = \begin{pmatrix} 3 & -4 \\ 1 & 7 \end{pmatrix}$ and $C = \begin{pmatrix} -5 & -1 \\ 0 & 3 \end{pmatrix}$. Evaluate
 - $2A + 3B$,
 - $C - 4A$,
 - BC .

- Let $D = \begin{pmatrix} 2 & -1 \\ 1 & 3 \\ 5 & 4 \end{pmatrix}$, $E = \begin{pmatrix} 0 & 3 & -2 \\ 1 & 4 & 6 \end{pmatrix}$ and $F = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$. Evaluate the following

where possible.

- DE
- ED
- DF
- EF