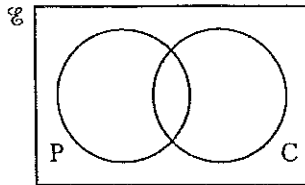


# IGCSE – Tree diagrams – paper 4 – 4

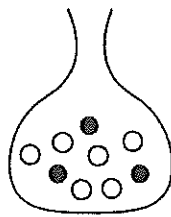
May 04 Paper 4

- 7 (a) There are 30 students in a class.  
20 study Physics, 15 study Chemistry and 3 study neither Physics nor Chemistry.

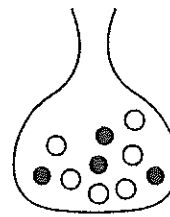


- (i) Copy and complete the Venn diagram to show this information. [2]
- (ii) Find the number of students who study both Physics and Chemistry. [1]
- (iii) A student is chosen at random. Find the probability that the student studies Physics but not Chemistry. [2]
- (iv) A student who studies Physics is chosen at random. Find the probability that this student does not study Chemistry. [2]

(b)



A



B

Bag A contains 6 white beads and 3 black beads.  
Bag B contains 6 white beads and 4 black beads.  
One bead is chosen at random from each bag.  
Find the probability that

- (i) both beads are black, [2]
- (ii) at least one of the two beads is white. [2]

The beads are not replaced.  
A second bead is chosen at random from each bag.  
Find the probability that

- (iii) all four beads are white, [3]
- (iv) the beads are not all the same colour. [3]