

Subject n°9

PROBABILITIES

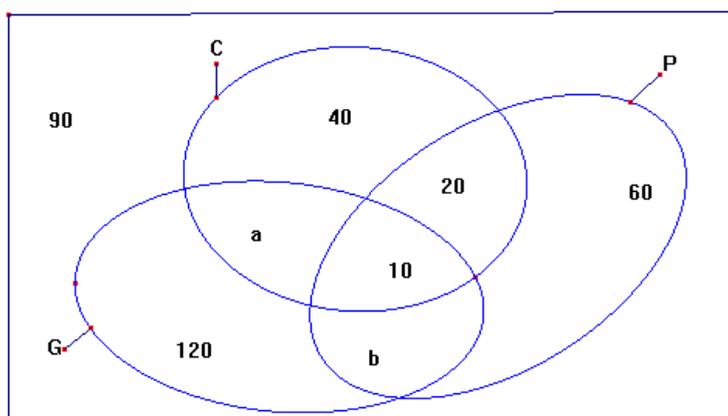
Please do not write on the exam paper, and do not forget to give back the examination paper at the end of the test.

I. The Venn diagram below indicates the type of wastes sorted by the 400 inhabitants of a village.

C represents Compost

P represents Paper

G represents Glass



a) Given that 100 inhabitants sort compost, calculate a and b .

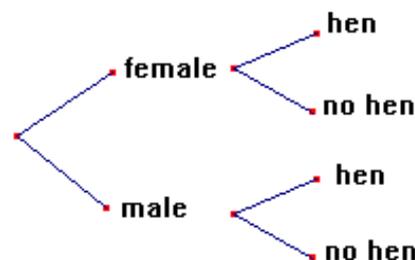
b) Find the probability that one of these inhabitants selected at random sorts :

- (i) paper
- (ii) glass and paper
- (iii) glass but not compost
- (iv) compost or paper

II. Among the people who sort compost, 60 % are female.

30 % of the females and 20 % of the males own a hen.

a) Complete the tree diagram.



b) What is the probability that a randomly selected person :

- (i) is a female and has a hen.
- (ii) does not have a hen.

(Vocabulary: a hen = une poule)