

19 In a class of 30 students

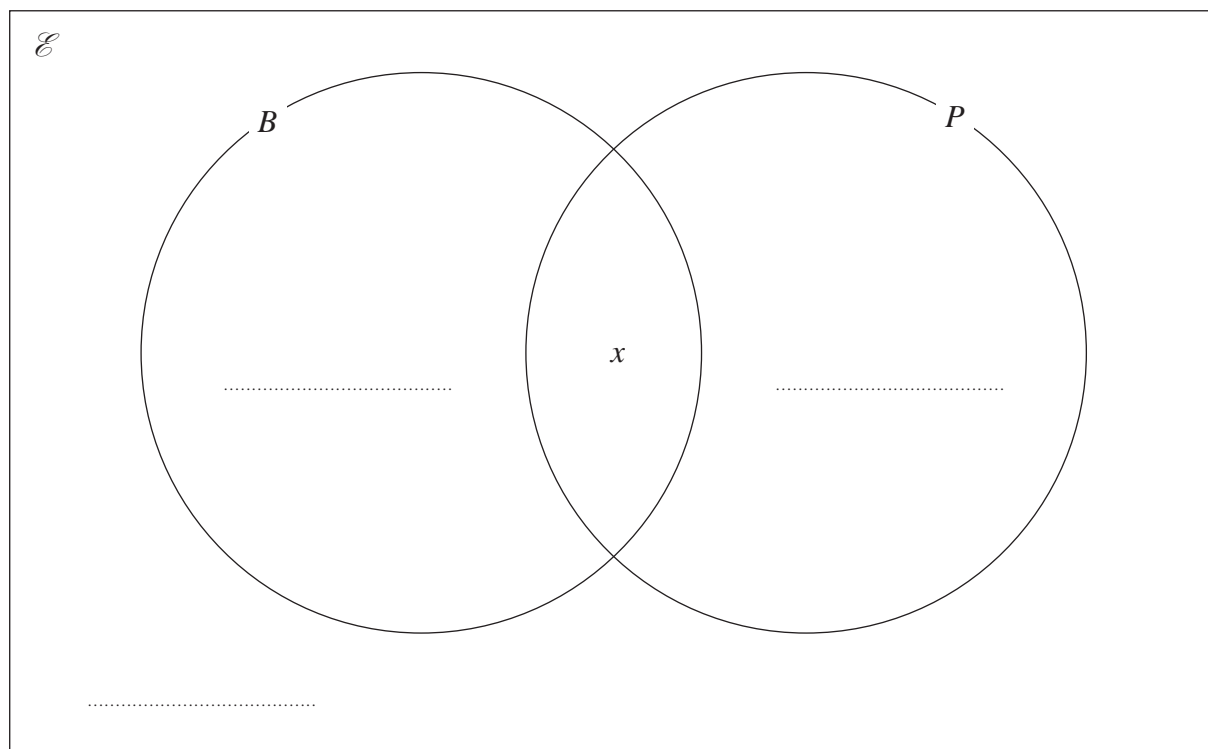
15 have a black pen (B)

16 have a pencil (P)

3 have no black pen and no pencil

x have a black pen and a pencil

- (a) Use the information above to complete the Venn diagram, giving answers in terms of x where necessary.



(2)

- (b) Find the value of x

$x = \dots\dots\dots$
(2)

- (c) One of these 30 students is chosen at random.

Write down the probability that this student has a black pen but does not have a pencil.

$\dots\dots\dots$
(1)

(Total for Question 19 is 5 marks)

