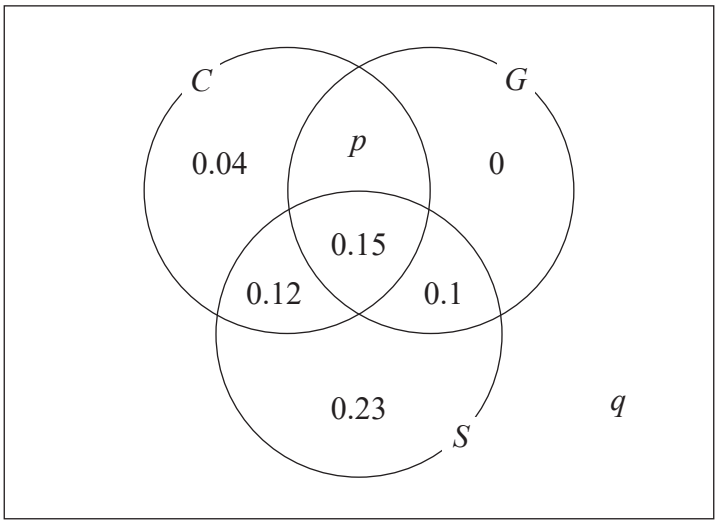
6. The Venn diagram shows the probabilities related to teenagers playing 3 particular board games.

C is the event that a teenager plays Chess
S is the event that a teenager plays Scrabble
G is the event that a teenager plays Go

where p and q are probabilities.



(a) Find the probability that a randomly selected teenager plays Chess but does not play Go.

(1)

Given that the events C and S are independent,

(b) find the value of p

(4)

(c) Hence find the value of q

(2)

(d) Find (i) $P((C \cup S) \cap G')$

(1)

(ii) $P(C \mid (S \cap G))$

(2)

A youth club consists of a large number of teenagers.
In this youth club 76 teenagers play Chess and Go.

(e) Use the information in the Venn diagram to estimate how many of the teenagers in the youth club do not play Scrabble.

(3)

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Question 6 continued

Question 6 continued

(Total for Question 6 is 13 marks)

TOTAL FOR PAPER IS 75 MARKS

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