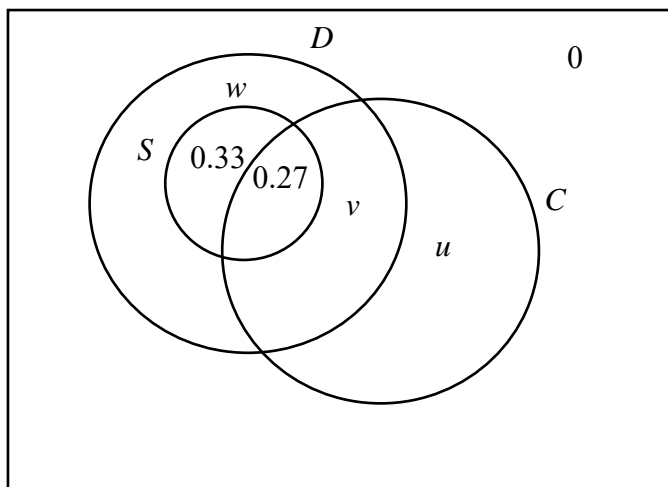**4.** The Venn diagram shows the probabilities of students' lunch boxes containing a drink, sandwiches and a chocolate bar.

D is the event that a lunch box contains a drink,
S is the event that a lunch box contains sandwiches,
C is the event that a lunch box contains a chocolate bar,
u, v and w are probabilities.

(a) Write down $P(S \cap D')$.

(1)

One day, 80 students each bring in a lunch box.

Given that all 80 lunch boxes contain sandwiches and a drink,

(b) estimate how many of these 80 lunch boxes will contain a chocolate bar.

(3)

Given that the events S and C are independent and that $P(D|C) = \dfrac{14}{15}$,

(c) calculate the value of u, the value of v and the value of w.

(7)

(Total 11 marks)