16 A sample of 240 households were asked which, if any, of the following animals they own as pets:

- cats (C)
- dogs (D)
- tortoises (T)

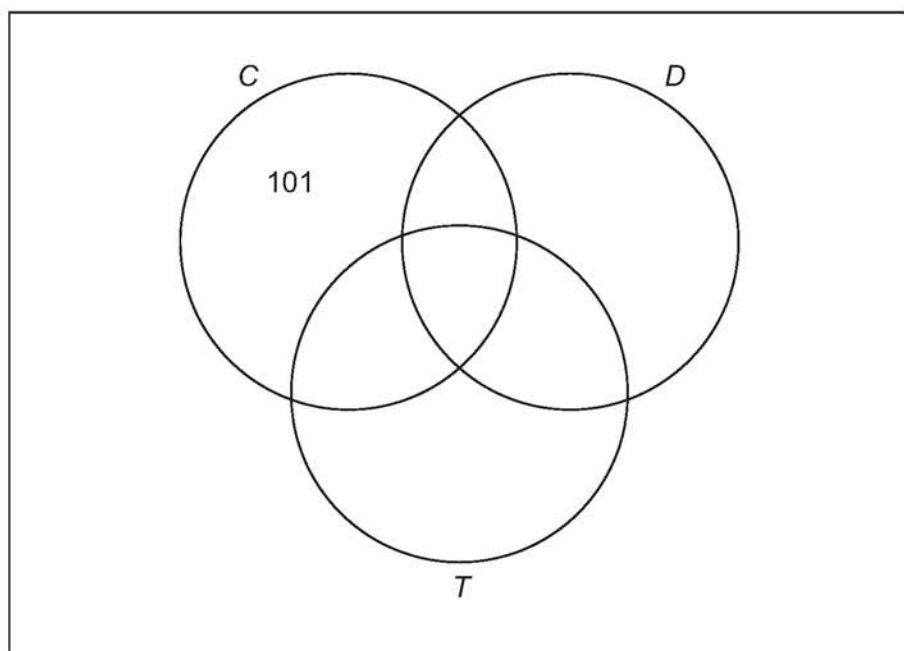The results are shown in the table below.

Types of pet	C	D	T	C and D	C and T	D and T	C, D and T
Number of households	153	70	45	48	21	32	17

16 (a) Represent this information by fully completing the Venn diagram below.

[3 marks]

16 (b) A household is chosen at random from the sample.

16 (b) (i) Find the probability that the household owns a cat only.

[1 mark]

16 (b) (ii) Find the probability that the household owns at least two of the three types of pet.

[2 marks]

16 (b) (iii) Find the probability that the household owns a cat or a dog or both, given that the household does not own a tortoise.

[2 marks]

16 (c) Determine whether a household owning a cat and a household owning a tortoise are independent of each other.

Fully justify your answer.

[2 marks]