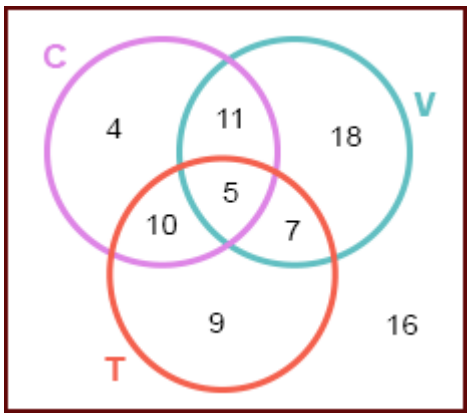
PROBABILITIES FROM DATA DISPLAYS

TASK 1 Use a Venn diagram to find probabilities

The diagram shows how many members in a travel club visited China, Vietnam or Thailand.



If a person from this club is selected at random, use **fractions** to show the probability that the person:

a did not visit any of the 3 countries

b visited all 3 countries

c visited China

d only visited China

e visited at least 2 of the countries

f visited only one country

g visited Vietnam and Thailand but not China

TASK 2 Create a diagram or table to find probabilities

Fifty students were asked whether they liked snorkelling or cycling. The results showed that 32 liked cycling, 15 liked snorkelling and 12 liked both. Show this data in a Venn diagram or two-way table.

If a student is selected randomly from these 50 students, find the probability that the student likes:

a cycling but not snorkelling	**b** only one of these sports
c at least one of the sports	**d** neither of the sports

TASK 3 Use a two-way table to find probabilities

The two-way table shows the numbers of some types of books in Janine's library. Complete the table.

Janine's books

	Fiction	Non-fiction	Totals
Hardcover	13		57
Softcover		7	
Totals			153

Write each of the following probabilities as a fraction.

Find the following probabilities for a book that is selected at random **from the library**.

a P(fiction)	**b** P(hardcover)
c P(non-fiction)	**d** P(softcover)
e P(fiction and hardcover)	**f** P(non-fiction and softcover)
g P(fiction and softcover)	**h** P(neither fiction nor hardcover)
i P(either fiction or softcover)	**j** P(either non-fiction or softcover)
k If you have a softcover book in your hand, what is the probability that it is fiction?	**l** If you have a fiction book in your hand, what is the probability that it is softcover?