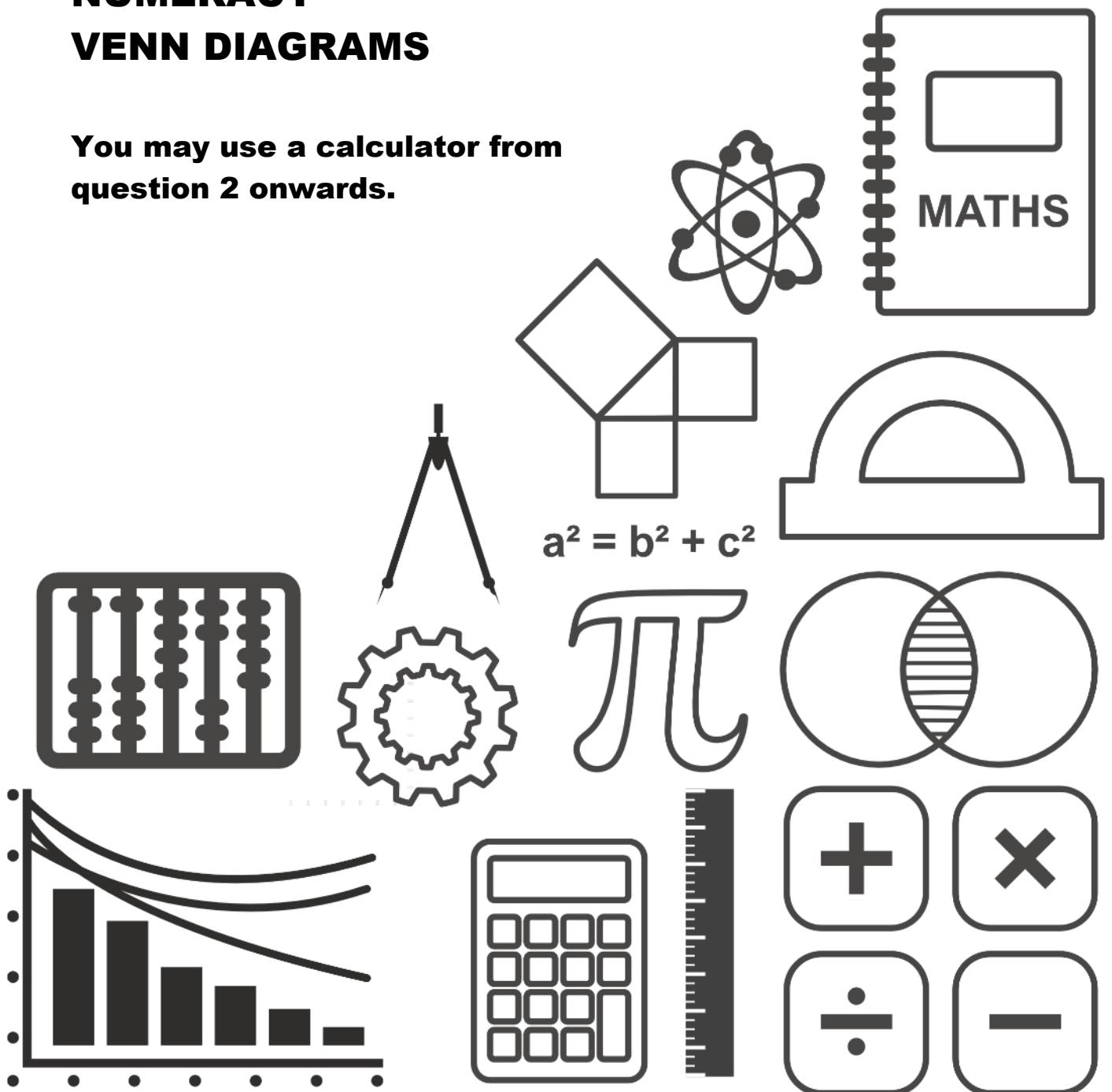


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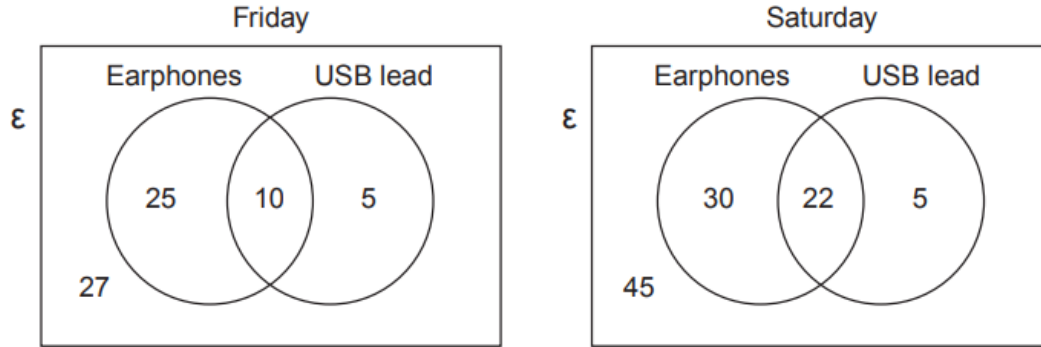
GCSE TOPIC BOOKLET NUMERACY VENN DIAGRAMS

You may use a calculator from
question 2 onwards.



1.

Sound5 sells pairs of earphones and USB leads.
 The Venn diagrams show the number of customers who visited the shop last Friday and last Saturday.
 No customers visited the shop on both days.
 No customers bought more than 1 pair of earphones and 1 USB lead.



Earphones sell for £15 and USB leads sell for £3.

(a) How much did *Sound5* customers spend buying USB leads on **Friday**? [2]

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(b) Over the two days, how many customers did **not** buy either earphones or a USB lead? Circle your answer. [1]

- 27 45 40 57 72

.....

.....

(c) What fraction of **Friday**'s customers bought both earphones and a USB lead? Circle your answer. [1]

- $\frac{1}{10}$ $\frac{1}{4}$ $\frac{10}{40}$ $\frac{10}{67}$ $\frac{40}{67}$

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- (d) How much money in total did *Sound5* customers spend on buying earphones, USB leads or both on **Saturday**?
 You must show all your working. [4]

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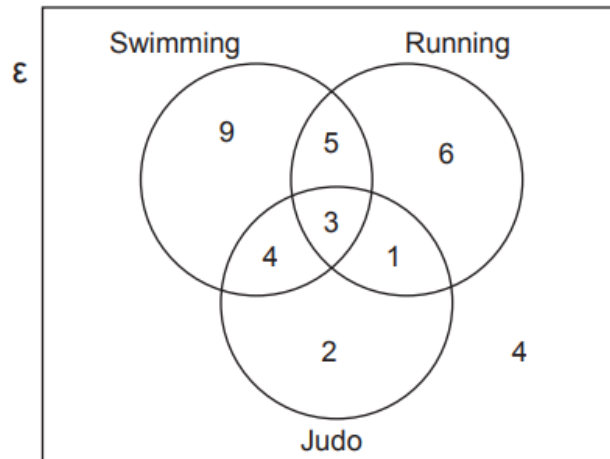
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2. There are 34 pupils in class 10A.
 Dewi carried out a survey to find out how many of these pupils take part in swimming, running and judo.
 He displayed his results in a Venn diagram, as shown below.



- (a) How many of the pupils in class 10A take part in both judo and running?
 Circle your answer. [1]

1 8 4 3 21

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- (b) How many of the pupils in class 10A take part in swimming?
 Circle your answer. [1]

9 4 14 3 21

.....

- (c) How many of the pupils in class 10A **do not** take part in judo?
 Circle your answer. [1]

9 10 20 24 15

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- (d) Calculate the percentage of the pupils in class 10A who **do not** take part in swimming, running or judo.
Give your answer correct to 1 decimal place. [4]

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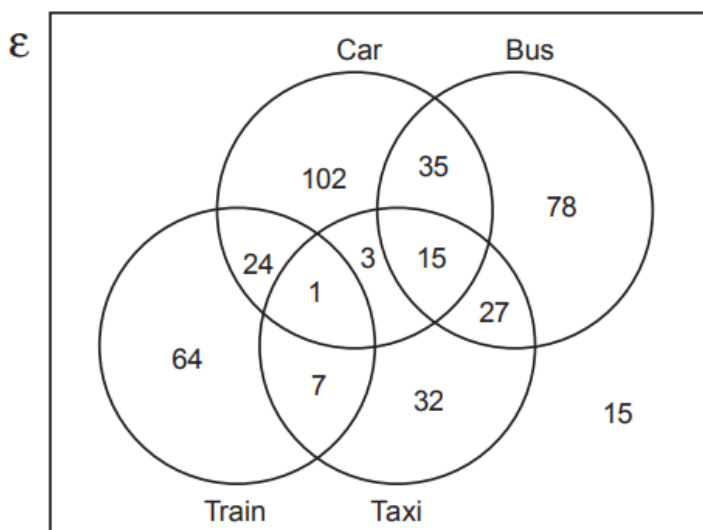
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3.



- (a) Rhian carried out a survey before an international rugby match. She asked a number of Wales supporters how they travelled to the match. Rhian displayed her results in a Venn diagram, as shown below.



- (i) How many of these supporters' journeys included travel by both train and taxi? Circle your answer. [1]

1 3 7 8 10

.....

- (ii) How many of these supporters' journeys included travel by car? Circle your answer. [1]

19 78 102 180 195

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- (iii) Calculate the percentage of the number of supporters in the survey whose journeys did **not** include any travel by car, bus, train, or taxi.
Give your answer correct to 1 decimal place. [4]

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- (ii) How many of these supporters' journeys included travel by car?
Circle your answer. [1]

19 78 102 180 195

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- (iii) Calculate the percentage of the number of supporters in the survey whose journeys did **not** include any travel by car, bus, train, or taxi.
Give your answer correct to 1 decimal place. [4]

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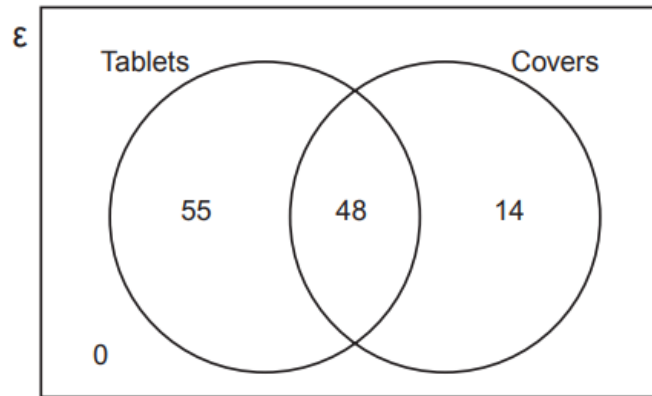
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4. *Airand Electronics* only sells digital tablets and covers.



The Venn diagram shows the number of items sold by *Airand Electronics* during the first week in May.



Each tablet was sold for £220.
Each cover was sold for £18.

How much money in total did *Airand Electronics* take in the first week of May?

You must show all your working.

[3]

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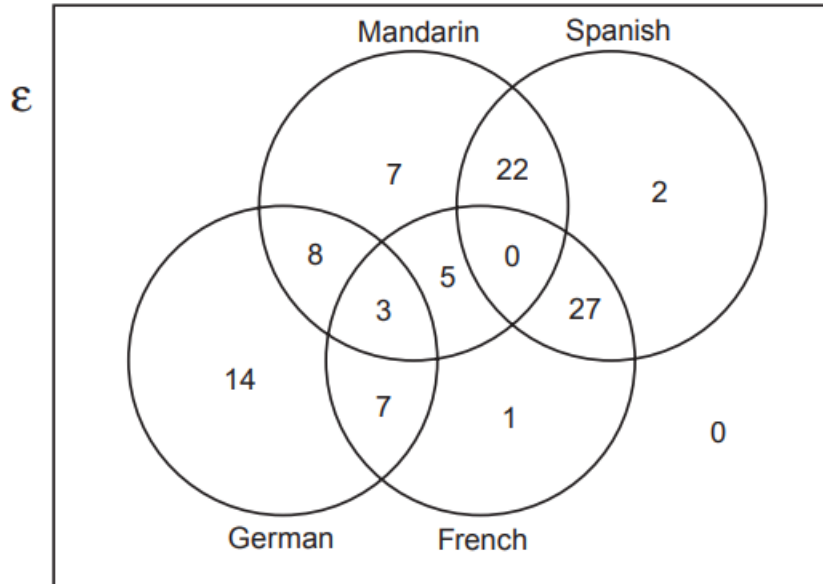
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5. The Headteacher of Ysgol Maes Newydd gave *option forms* to all Year 9 pupils.

The form asked which foreign languages the pupils would like to study in Year 10.

There were 4 languages listed on the form: French, German, Spanish and Mandarin.
 The pupils could select as many of the languages as they wished.
 All pupils completed and returned the *option form*.

The Headteacher displayed the results in a Venn diagram, as shown below.



(a) How many pupils did not select at least one of the four languages?
 Circle your answer.

[1]

- 0 1 3 5 7

(b) How many pupils are there in Year 9?
 Circle your answer.

[1]

- 92 94 96 98 100

(c) How many pupils selected only one language?

[1]

(d) Which was the most popular language selected?
You must show all your working.

[3]

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(e) The Headteacher can offer only 2 out of these 4 languages in Year 10.
She writes the timetable so that as many as possible of the pupils who chose 2 languages
are able to study those 2 languages.
Which **two** languages will the Headteacher offer in Year 10?
You must show all your working and give a reason for your answer.

[2]

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