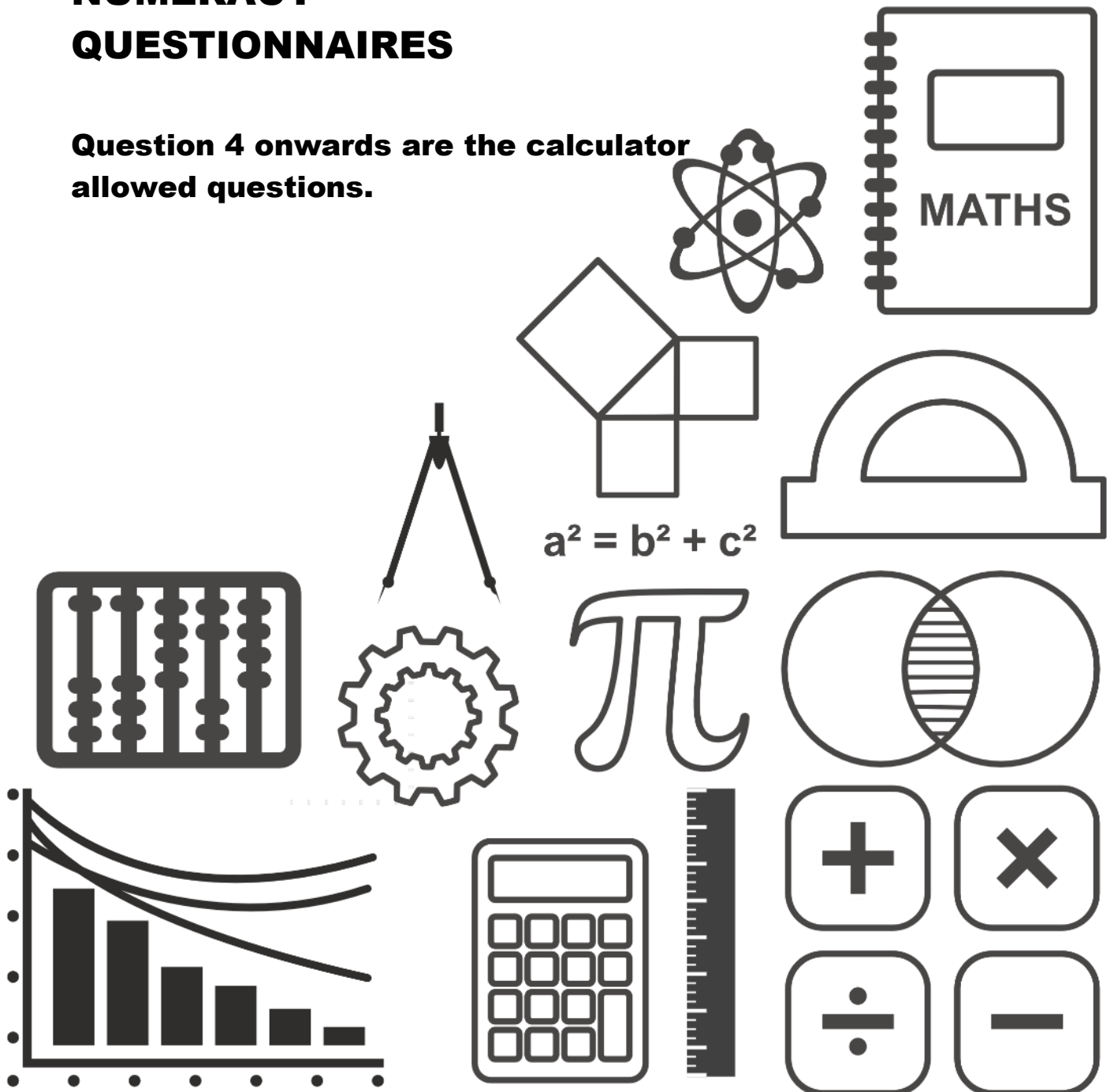


MATHSDIY

GCSE TOPIC BOOKLET NUMERACY QUESTIONNAIRES

Question 4 onwards are the calculator allowed questions.



1.

Catrin considers the data she needs to collect to find out if people are happy with their bank.

Catrin includes the following questions in her questionnaire.

Write down one set of possible groups that could be used as answer options for each of these questions. [2]

Question 1: How old are you?

Groups:

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Question 2: If you have a bank account, how happy are you with your bank?

Groups:

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2.

- (a) Ysgol Fron Isa and Ysgol Caewen are two very different high schools. One school is large, and in a rural area. The other is a small school in a town. The town in which the small school is situated has many traffic-free cycle routes.

All of the pupils in Years 7 to 10 were surveyed in both of these schools. They were asked the following questions.

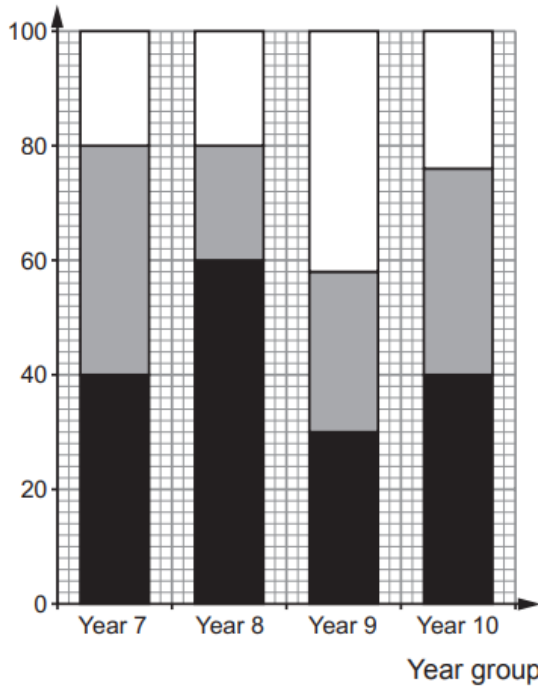
Do you cycle to school?	Yes <input style="width: 40px; height: 20px;" type="checkbox"/>	No <input style="width: 40px; height: 20px;" type="checkbox"/>
If you answered 'no', would you like to cycle to school?	Yes <input style="width: 40px; height: 20px;" type="checkbox"/>	No <input style="width: 40px; height: 20px;" type="checkbox"/>

The results were displayed in graphs, as shown below.

Key: Cycle Would like to cycle Others

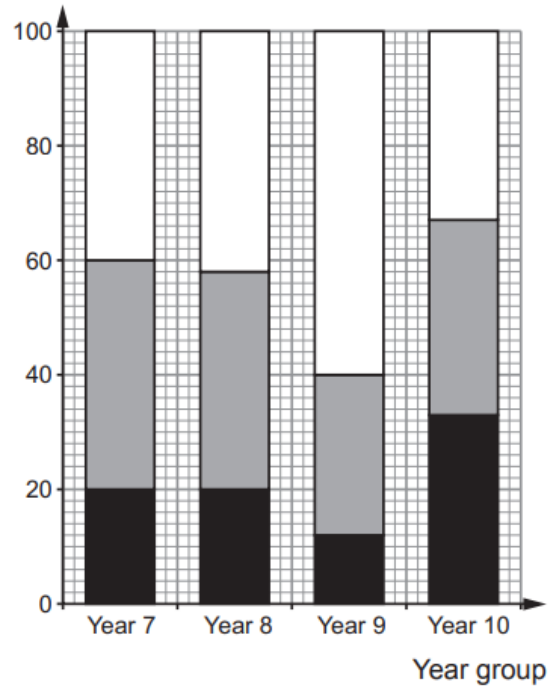
Ysgol Fron Isa

Percentage of pupils



Ysgol Caewen

Percentage of pupils



- (i) Which school and year group has an approximately equal split between the 3 categories:
- pupils who cycle to school,
 - pupils who would like to cycle to school, and
 - other pupils?
- [1]

School: Year Group:

- (ii) Circle either TRUE or FALSE for each of the following statements. [3]

There are definitely more pupils in Ysgol Fron Isa who cycle to school than in Ysgol Caewen.	TRUE	FALSE
Both schools have pupils in each year group with no interest in cycling to school.	TRUE	FALSE
The questions asked were biased.	TRUE	FALSE
Approximately 20% of the pupils surveyed in Ysgol Caewen cycle to school.	TRUE	FALSE
It is more likely that it is Ysgol Fron Isa that is the small school situated in a town.	TRUE	FALSE

(b) In January 2011, there were 1200 miles of National Cycle Network (NCN) routes in Wales. In January 2016, there were 1400 miles of NCN routes in Wales.

(i) If the number of miles of NCN routes in Wales were to continue to increase by the same number of miles per year, how many miles of cycle routes would there be in January 2018? [2]

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(ii) Why is your answer in (i) unlikely to be an accurate estimate of the number of miles of NCN routes in Wales in January 2018? [1]

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3. A survey was carried out to find how often teenagers buy DVDs.

The following two questions were asked in a questionnaire.

Q1. <i>Where do you live?</i>			
Q2. <i>How often do you buy DVDs?</i>			
<i>Never</i>	<i>1-10 times</i>	<i>10-15 times</i>	<i>More than 15 times</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(a) For each question give **one** reason why it is **not** suitable. [2]

Q1.

.....

Q2.

.....

.....

- (b) The survey was carried out by leaving copies of the questionnaire on the DVD shelves in a supermarket.

Give **one** criticism of how the survey was carried out. [1]

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.....

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4. A survey was carried out to find out how often people used the swimming pool in a sports centre. The following two questions were asked in a questionnaire.

Q1. How far away from the sports centre do you live?
 Q2. How often do you go swimming?

- (i) Give **one** reason why question 1 is a useful question to ask. [1]

.....

.....

- (ii) Explain why the answers to question 2 might be difficult to analyse. [1]

.....

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- (iii) A person answers that they go swimming. Write a question that could be used to find out how long this person spends in the pool, on average, each time they go swimming. You must give groups for collecting the data. [2]

Question:

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5. Lloyd has carried out a survey in his school.
He surveyed 300 pupils.
Below is a section from his questionnaire.

1. Which year group are you in?
2. Do you like the colours of the school uniform?
3. What is your favourite colour?

Afterwards, Lloyd thinks he should have given option boxes in questions 1 and 2.
What could these option boxes be? [2]

Question 1:
.....
.....

Question 2:
.....
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