

# Estimation

A collection of 9-1 Maths GCSE Sample and Specimen questions from AQA, OCR, Pearson-Edexcel and WJEC Eduqas.

Name:	
Total Marks:	

1. Estimate the value of

$$\frac{4.34 \times 19.2}{11.2}$$

..... [2]

2. Paul organised an event for a charity.

Each ticket for the event cost £19.95

Paul sold 395 tickets.

Paul paid costs of £6000

He gave all money left to the charity.

(a) Work out an estimate for the amount of money Paul gave to the charity.

£..... [3]

(b) Is your answer to (a) an underestimate or an overestimate?

Give a reason for your answer.

[1]

3. A cinema has

37 rows of seats

23 seats in each row.

Adult tickets are £8 each.

Child tickets are £6 each

The cinema has sold tickets for every seat.

The manager estimates that £6400 was raised from these tickets.

200 child tickets were sold.

Check whether the manager's estimate was close to the exact amount of money raised.

[6]

4. There are 1200 students at a school.

Kate is helping to organise a party.

She is going to order pizza.

Kate takes a sample of 60 of the students at the school.

She asks each student to tell her one type of pizza they want.

The table shows information about her results.

Pizza	Number of students
ham	20
salami	15
vegetarian	8
margarita	17

Work out how much ham pizza Kate should order.

Write down any assumption you make and explain how this could affect your answer.

[3]

5. Estimate the answer to  $51 \times 3.9$ .

[2]

6. Shari was asked to buy the following items from her local shop.

Item	Price
Chicken curry	£2.97
Pizza	£3.04
Washing powder	£6.09
Butter	£1.47
Bread	89 pence

The shopkeeper tells Shari that the total cost is £102.23.

Shari does not think that this is correct.

(a) Show clearly how Shari could approximate each of these prices to convince the shopkeeper that his total is not correct.

[3]

(b) What mistake do you think the shopkeeper made?

[1]

7. A unit of gas costs 4.2 pence.

On average Ria uses 50.1 units of gas a week.  
She pays for the gas she uses in 13 weeks.

(a) Work out an estimate for the amount Ria pays.

..

..... [3]

(b) Is your estimate to part (a) an underestimate or an overestimate?

Give a reason for your answer.

[1]

8. Jayne writes down the following

$$3.4 \times 5.3 = 180.2$$

Without doing the exact calculation, explain why Jayne's answer cannot be correct.

[1]

## CREDITS AND NOTES

Question	Awarding Body
1	OCR
2	Pearson Edexcel
3	AQA
4	Pearson Edexcel
5	WJEC Eduqas
6	WJEC Eduqas
7	Pearson Edexcel
8	Pearson Edexcel

### Notes:

These questions have been retyped from the original sample/specimen assessment materials and whilst every effort has been made to ensure there are no errors, any that do appear are mine and not the exam board s (similarly any errors I have corrected from the originals are also my corrections and not theirs!).

Please also note that the layout in terms of fonts, answer lines and space given to each question does not reflect the actual papers to save space.

These questions have been collated by me as the basis for a GCSE working party set up by the GLOW maths hub - if you want to get involved please get in touch. The objective is to provide support to fellow teachers and to give you a flavour of how different topics "could" be examined. They should not be used to form a decision as to which board to use. There is no guarantee that a topic will or won't appear in the "live" papers from a specific exam board or that examination of a topic will be as shown in these questions.

### Links:

AQA <http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300>

OCR <http://ocr.org.uk/gcsemaths>

Pearson Edexcel <http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

WJEC Eduqas <http://www.eduqas.co.uk/qualifications/mathematics/gcse/>

### Contents:

This version contains questions from:

AQA – Sample Assessment Material and Practice set 1

OCR – Sample Assessment Material and Practice set 1

Pearson Edexcel – Sample Assessment Material, Specimen set 1 and Specimen set 2.

WJEC Eduqas – Sample Assessment Material

