Rounding, Bounds and Error Intervals

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

Name:	
Total Marks:	

1. (a) Mia cycled 23 km, correct to the nearest km.

What is the least distance Mia could have cycled?

(a) …..................................... km [1]

(b) A number x, rounded to one decimal place, is 4.7.

So the error interval for x is given by 4.65 ≤ x < 4.75.

(i) A number y, rounded to two decimal places, is 4.13.

Write down the error interval for y.

(b)(i) ….. [2]

(ii) A number z, rounded to two significant figures, is 4700.

Write down the error interval for z.

(ii) ….. [2]

2. (a) Round 27 146 correct to

(i) the nearest ten,

(i) …... [1]

(ii) the nearest thousand.

(ii)…... [1]

(b) The width of a bench, *b* is 984.8 cm correct to one decimal place.

Write down the error interval for the width of the bench.

(b) …...................... ≤ *b* <…...................... [2]

3. Round 162.645

    (i) to 1 decimal place,

                                  (i) …….. [1]

    (ii) to 2 significant figures.

                                  (ii) …….. [1]

4. Find p if $p^3 = 37$.

   Give your answer correct to 2 decimal places.

                                  …….............................. [2]

5. Write 2148 correct to the nearest 100

                                  …….. [1]

6. Write 6819 to the nearest 1000

                                  …….. [1]

7. Jim rounds a number, x, to one decimal place.

   The result is 7.2

   Write down the error interval for x.

                                  …….. [2]

8. *x* = 2500 to the nearest 100

   Circle the smallest possible value of x.

                                        [1]

             2449   2450   2495   2499

9. (a) Write 2187 correct to the nearest 10.

                                        [1]

(b) Write 54 478 correct to the nearest 1000.

                                        [1]

10. Write 4.4354 correct to 2 decimal places

.... [1]

11. Write the number 5689 correct to the nearest thousand.

.... [1]

12. The length, *L* cm, of a line is measured as 13 cm correct to the nearest centimetre.

Complete the following statement to show the range of possible values of *L*

.... ≤*L* < .... [2]

Question	Awarding Body
1	OCR
2	OCR
3	OCR
4	OCR
5	Pearson Edexcel
6	Pearson Edexcel
7	Pearson Edexcel
8	AQA
9	WJEC Eduqas
10	Pearson Edexcel
11	Pearson Edexcel
12	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