Name ANSWERS	Class

MATHS TEACHER HUB

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Error intervals

(9 – 1) Topic booklet

Foundation

These questions have been collated from previous years GCSE Mathematics papers.

You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser.	Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
  – *there may be more space than you need.*
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- You must **show all your working out.**
- If the question is a **1F** question you are not allowed to use a calculator.
- If the question is a **2F** or a **3F** question, you may use a calculator to help you answer.

Information

- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Answer ALL questions
Write your answers in the space provided.
You must write down all the stages in your working.

22 The length of a pencil is 128 mm correct to the nearest millimetre.

Complete the error interval for the length of the pencil.

127.5 mm ⩽ length < 128.5 mm

November 2019 – Paper 2F **(Total for Question 22 is 2 marks)**

22 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

$12.5 \leqslant L < 13.5$

Specimen 1 – Paper 3F **(Total for Question 22 is 2 marks)**

23 The length of a football pitch is 90 metres, correct to the nearest metre.

Complete the error interval for the length of the football pitch.

89.5 m ⩽ length < 90.5 m

June 2022 – Paper 2F **(Total for Question 23 is 2 marks)**

23 Jess rounds a number, x, to one decimal place.
The result is 9.8

Write down the error interval for x.

$9.75 \leqslant x < 9.85$

(2)

November 2017 – Paper 3F **(Total for Question 23 is 2 marks)**

23 A number, n, is rounded to 2 decimal places.
The result is 4.76

Using inequalities, write down the error interval for n.

$4.755 \leqslant n < 4.765$

June 2017 – Paper 2F **(Total for Question 23 is 2 marks)**

23 Harley's house has a value of £160 000 correct to 2 significant figures.

(i) Write down the least possible value of the house.

£ 155000

(1)

(ii) Write down the greatest possible value of the house.

£ 165000

(1)

June 2017 – Paper 3F **(Total for Question 23 is 2 marks)**

25

$x = 4700$ correct to 2 significant figures.

Complete the error interval for x.

$4650 \leqslant x < 4750$

(2)

November 2022 – 2F **(Total for Question 25 is 2 marks)**

25 A number, m, is rounded to 1 decimal place.
The result is 9.4

Complete the error interval for m.

$9.35 \leqslant m < 9.45$

May 2020 – Paper 3F **(Total for Question 25 is 2 marks)**

25 Sally used her calculator to work out the value of a number y.

The answer on her calculator display began

8.3

Complete the error interval for y.

$8.3 \leqslant y < 8.4$

June 2019 – Paper 2F **(Total for Question 25 is 2 marks)**

25 Jim rounds a number, x, to one decimal place.
The result is 7.2

Write down the error interval for x.

$7.15 \leqslant x < 7.25$

Specimen 2 – Paper 3F **(Total for Question 25 is 2 marks)**

26 A number, d, is rounded to 1 decimal place.
The result is 12.7

Complete the error interval for d.

$12.65 \leqslant d < 12.75$

June 2023 – Paper 2F **(Total for Question 26 is 2 marks)**

27 Freddie measured the length of a pencil as 7.2 cm correct to 1 decimal place.

Complete the error interval for the length, p cm, of the pencil.

$7.15 \leqslant p < 7.25$

November 2021 – Paper 1F **(Total for Question 27 is 2 marks)**