Name ANSWERS	Class

MATHS TEACHER HUB

www.MathsTeacherHub.com

Standard Form

(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.

15 (a) Write 4.7×10^{-1} as an ordinary number.

0.47

(1)

(b) Work out the value of $(2.4 \times 10^{3}) \times (9.5 \times 10^{5})$
Give your answer in standard form.

= 2280000000

2.28×10^{9}

(2)

June 2017 – Paper 2F **(Total for Question 15 is 3 marks)**

18 Work out the value of $\dfrac{2.645 \times 10^{9}}{1.15 \times 10^{3}}$

Give your answer in standard form.

= 2300000

2.3×10^{6}

May 2018 – Paper 3F **(Total for Question 18 is 2 marks)**

20 (a) Write 468 000 in standard form.

4.68×10^5

(1)

(b) Write 5.037×10^{-4} as an ordinary number.

0.0005037

(1)

November 2023 – Paper 3F **(Total for Question 20 is 2 marks)**

21 Work out $\dfrac{0.06 \times 0.0003}{0.01}$

Give your answer in standard form.

$$\frac{(6 \times 10^{-2}) \times (3 \times 10^{-4})}{(1 \times 10^{-2})} = \frac{18 \times 10^{-6}}{1 \times 10^{-2}}$$

$$= 18 \times 10^{-4}$$

1.8×10^{-3}

November 2017 – Paper 1F **(Total for Question 21 is 3 marks)**

23 (a) Write 4.5×10^5 as an ordinary number.

450000

(1)

(b) Write 0.007 in standard form.

7×10^{-3}

(1)

(c) Work out $4.2 \times 10^3 + 5.3 \times 10^2$
Give your answer in standard form.

$= 4730$

4.73×10^3

(2)

(Total for Question 23 is 4 marks)

23 (a) (i) Write 5.3×10^4 as an ordinary number.

53000

(1)

(ii) Write 7.4×10^{-5} as an ordinary number.

0·000074

(1)

(b) Calculate the value of $9.7 \times 10^6 + 2.45 \times 10^7$
Give your answer in standard form.

= 34200000

$3 \cdot 42 \times 10^7$

(2)

(Total for Question 23 is 4 marks)

25 Work out $(13.8 \times 10^7) \times (5.4 \times 10^{-12})$
Give your answer as an ordinary number.

$7 \cdot 452 \times 10^{-4}$

0·0007452

(Total for Question 25 is 2 marks)

26 (a) Write 1.63×10^{-3} as an ordinary number.

0.00163

(1)

(b) Write 438 000 in standard form.

4.38×10^{5}

(1)

(c) Work out $(4 \times 10^{3}) \times (6 \times 10^{-5})$
Give your answer in standard form.

$4 \times 6 \times 10^{3} \times 10^{-5}$

24×10^{-2}

2.4×10^{-1}

2.4×10^{-1}

(2)

June 2022 – Paper 1F

(Total for Question 26 is 4 marks)

27 Work out $(3.42 \times 10^{-7}) \div (7.5 \times 10^{-6})$
Give your answer in standard form.

$= 0.0456$

4.56×10^{-2}

November 2019 – Paper 2F

(Total for Question 27 is 2 marks)

27 (a) Write 0.00562 in standard form.

5.62×10^{-3}

(1)

(b) Write 1.452×10^3 as an ordinary number.

1452

(1)

June 2019 – Paper 2F **(Total for Question 27 is 2 marks)**

27 (a) Write the number 0.00007547 in standard form.

7.547×10^{-5}

(1)

(b) Write 3.42×10^4 as an ordinary number.

34200

(1)

(c) Work out $\dfrac{2.3 \times 10^4 \times 6.7 \times 10^3}{5 \times 10^{-8}}$ $= 3.082 \times 10^{15}$

3.082×10^{15}

(2)

November 2018 – Paper 2F **(Total for Question 27 is 4 marks)**

28 (a) Write $(9 \times 10^4) : (4.5 \times 10^6)$ in the form $1 : n$ where n is an integer.

1 : 50

1 : 50

(2)

(b) Write the following numbers in order of size.
Start with the smallest number.

④	③	②	①
5.625×10^4	5625	$56\,250 \times 10^{-3}$	$0.005\,625 \times 10^5$
56250	5625	56·25	5·625

0.005625×10^3, 56250×10^{-3}, 5625, 5.625×10^4

(2)

June 2023 – Paper 3F **(Total for Question 28 is 4 marks)**

28 Write these numbers in order of size.
Start with the smallest number.

③	②	④	①
6.72×10^5	67.2×10^{-4}	672×10^4	0.000 672
672000	0·00672	6720000	0·000672

0·000675, 67.2×10^{-4}, 6.72×10^5, 672×10^4

May 2020 – Paper 1F **(Total for Question 28 is 2 marks)**

28 (a) Write 32 460 000 in standard form.

3.246×10^7

(1)

(b) Write 4.96×10^{-3} as an ordinary number.

0.00496

(1)

Asma was asked to compare the following two numbers.

$A = 6.212 \times 10^8$ and $B = 4.73 \times 10^9$

She says,

"6.212 is bigger than 4.73 so A is bigger than B."

(c) Is Asma correct?
You must give a reason for your answer.

Asma is wrong, B is multiplied by another 10, making it bigger.

(1)

(Total for Question 28 is 3 marks)