Topical Past Paper Questions Workbook

Edexcel International GCSE Mathematics A (4MA1) 2F

Exam Series: Jan 2017 - Jan 2022

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Introduction

Each topical past paper questions workbook consists of hundreds of questions and their answer schemes, in the form of worksheets. Questions are assigned to each chapter according to their corresponding topic. Topics, in turn, are based on the items of the latest Edexcel International GCSE or A level syllabus. This book's specifications are as follows:

Title: Edexcel International GCSE Mathematics A (4MA1) Paper 2F
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Examination board: Pearson Edexcel
Subject code: 4MA1
Years covered: Jan 2017 - Jan 2022
Paper: 2F
Number of pages: 755
Number of questions: 604

Contents

Chapter 1

Numbers and the number system

1.1 Integers

1. 4MA1_2F_que_20220118 Q: 4

The table below shows the maximum recorded temperature and the minimum recorded temperature on one day in each of four countries.

Country	Maximum recorded temperature	Minimum recorded temperature
Morocco	19 °C	11 °C
Qatar	21 °C	18 °C
Finland	−19 °C	−28 °C
Canada	8 °C	−40 °C

(a) Which country has the highest maximum recorded temperature?

.....

(1)

(b) Work out the difference between the maximum recorded temperature in Finland and the minimum recorded temperature in Finland.

..... °C

(1)

On the same day, the minimum recorded temperature in Japan is 15 °C lower than the minimum recorded temperature in Morocco.

(c) Work out the minimum recorded temperature in Japan.

..... °C

(1)

(Total for Question 4 is 3 marks)

2. 4MA1_2FR_que_20220118 Q: 1

The table gives the total area of forest in each of six countries.

Country	Area of forest (km^2)
South Africa	92 410
Denmark	5871
El Salvador	2870
Bahamas	5150
Jamaica	3371
Syria	4910

(a) Which of these six countries has the least total area of forest?

.....

(1)

(b) Write down the value of the 4 in 92 410

.....

(1)

Two of the six countries each have a total area of forest of 5000 km^2 when rounded to the nearest thousand.

(c) Write down the name of the two countries.

..... and .....

(1)

(d) Write the number 3371 in words.

.....

(1)

(Total for Question 1 is 4 marks)

3. 4MA1_2F_que_20210304 Q: 3

The temperature in New York is –2 °C

At the same time, the temperature in Rabat is 16 °C higher than the temperature in New York.

(a) Work out the temperature in Rabat.

.....°C

(1)

Also, at the same time, the temperature in Helsinki is 17 °C lower than the temperature in New York.

(b) Work out the temperature in Helsinki.

.....°C

(1)

(Total for Question 3 is 2 marks)

4. 4MA1_2F_que_20210430 Q: 1

The table shows the length, in kilometres, of the coastline of each of five oceans.

Ocean	Length (kilometres)
Arctic	45 389
Atlantic	111 866
Indian	66 526
Pacific	135 663
Southern	17 968

(a) Which of these oceans has the greatest length of coastline?

.....

(1)

(b) Write the number 17 968 in words.

.....

(1)

(c) Write the number 66 526 correct to the nearest thousand.

.....

(1)

(d) Work out the total length of the coastlines of the Arctic Ocean and the Pacific Ocean.

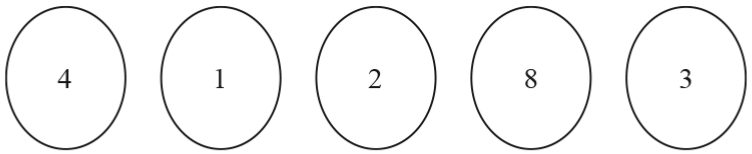
..... kilometres

(1)

(Total for Question 1 is 4 marks)

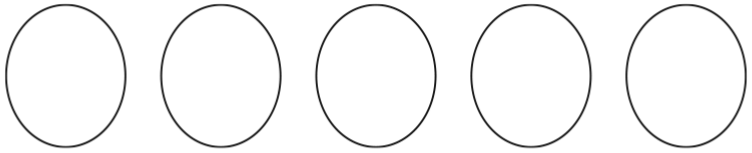
5. 4MA1_2FR_que_20210304 Q: 1

Here are five discs.
Each disc has a number on it.



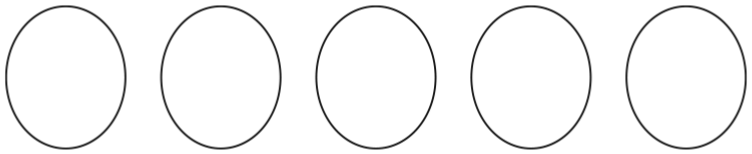
These five discs are arranged to make the number 41283

(a) Show how all five discs can be arranged to make the smallest number.



(1)

(b) Show how all five discs can be arranged to make the largest **even** number.



(1)

(c) Which of the five numbers on the discs are factors of 21?

.....

(2)

(d) Which of the five numbers on the discs are prime numbers?

.....

(2)

(Total for Question 1 is 6 marks)

6. 4MA1_2F_que_20200305 Q: 1

Here is a list of numbers

13 14 18 23 30 36

From the numbers in the list, write down

(i) an odd number

.....

(1)

(ii) the multiple of 4

.....

(1)

iii) the factor of 28

.....

(1)

(Total for Question 1 is 3 marks)

---

7. 4MA1_2F_que_20200305 Q: 11

Here are five mathematical signs

+	>	=	∈	<

(a) Write one of these five signs in each box so that each of these statements is true.

(i)

4 °C		9 °C

(1)

(ii)

–3 °C		–8 °C

(1)

The table gives information about the boiling points and the freezing points of some elements.

Element	Chlorine	Mercury	Neon	Oxygen
Boiling point (°C)	–35	357	–246	–183
Freezing point (°C)	–101	–39	–249	–218

(b) Which of these elements has the lowest boiling point?

.....

(1)

(c) Which of these elements has the largest difference in temperature between its boiling point and its freezing point?

.....

(1)

Dr Strauss is going to cool chlorine from its boiling point to its freezing point.
He knows that it will take 2 minutes for the temperature of the chlorine to go down 10 °C.

(d) Work out how long it will take the chlorine to cool from its boiling point to its freezing point?

..... minutes

(2)

(Total for Question 11 is 6 marks)

8. 4MA1_2F_que_20201106 Q: 4

The table gives the minimum temperature for January 2018 in each of six cities.

City	Minimum temperature (°C)
Barcelona	3
Donetsk	−10
Mexico City	−1
Mombasa	22
New York	−15
Sydney	15

(a) Which of these six cities has the lowest minimum temperature?

.....

(1)

(b) Work out the difference between the minimum temperature of Donetsk and the minimum temperature of Sydney.

..... °C

(1)

The minimum temperature in Edmonton for January 2018 was 50°C less than the minimum temperature in Mombasa for January 2018

(c) Work out the minimum temperature in Edmonton for January 2018

..... °C

(1)

(Total for Question 4 is 3 marks)

9. 4MA1_2FR_que_20201106 Q: 1

The table shows the depth of six ocean trenches.

Trench	Depth (metres)
Diamantina	8047
Eurasian Basin	4437
Philippine	10 540
Puerto Rico	8594
South Sandwich	8458
Tonga	10 882

(a) Which of these trenches has the greatest depth?

.....

(1)

(b) Write down the value of the 5 in the number 8594

.....

(1)

(c) Write the number 4437 in words.

.....

(1)

When written correct to the nearest hundred, one of the numbers in the table is 8500

(d) What is this number?

.....

(1)

The Mariana Trench is 2864 metres deeper than the Diamantina Trench.

(e) Work out the depth of the Mariana Trench.

..... metres

(2)

(Total for Question 1 is 6 marks)

10. 4MA1_2FR_que_20190116 Q: 5

The table gives the midnight temperatures on 1st January for five cities in the USA.

City	Midnight temperature
Boston	–5 °C
Philadelphia	–4 °C
Orlando	10 °C
Chicago	–6 °C
Phoenix	8 °C

Here are the temperatures in °C.

–5 –4 10 –6 8

(a) Write these numbers in order of size.
Start with the smallest number.

(1)

(b) Work out the difference between the midnight temperature in Orlando and the midnight temperature in Boston.

°C

(1)

(c) Work out the temperature that is exactly halfway between 8 °C and –6 °C.

°C

(1)

On 1st January the midnight temperature in Minneapolis was 10 °C lower than the midnight temperature in Philadelphia.

(d) Work out the midnight temperature in Minneapolis.

°C

(1)

(Total for Question 5 is 4 marks)

11. 4MA1_2FR_que_20190607 Q: 1

The table shows the distance, in kilometres, from London to each of five cities.

City	Distance (km)
Rio de Janeiro	9280
New York	5567
Manila	10 734
Sydney	16 983
Kolkata	7962

(a) Write the number 9280 in words.

.....

(1)

(b) Which of the five cities is nearest to London?

.....

(1)

(c) Write down the value of the 7 in 10 734

.....

(1)

(d) Which of the five cities is **seven thousand nine hundred and sixty two** kilometres from London?

.....

(1)

(e) Write the number 16 983 correct to the nearest thousand.

.....

(1)

(Total for Question 1 is 5 marks)

12. 4MA0_2FR_que_20180116 Q: 13

A farmer has 190 eggs.
These eggs are packed into identical boxes.

There are 12 eggs in a completely full box.
The farmer completely fills as many boxes as possible with eggs.

(a) Work out the number of boxes the farmer completely fills.

.....

(2)

(b) Work out how many eggs are left over.

.....

(2)

(Total for Question 13 is 4 marks)

13. 4MA1_2F_que_20180608 Q: 5

(a) Write down a multiple of 8 that is between 20 and 50

.....

(1)

There is only one prime number that is an even number.

(b) Write down this number.

.....

(1)

Shreya says that 57 is a prime number.

(c) Is Shreya correct?
Give a reason for your answer.

.....

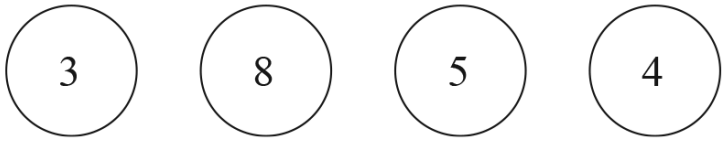
.....

(1)

(Total for Question 5 is 3 marks)

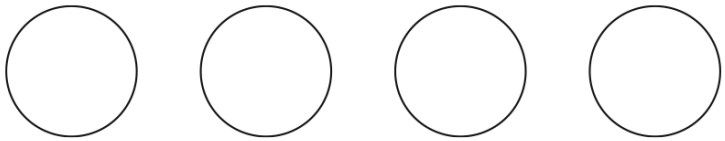
14. 4MA1_2FR_que_20180608 Q: 1

Here are four discs.
Each disc has a number on it.



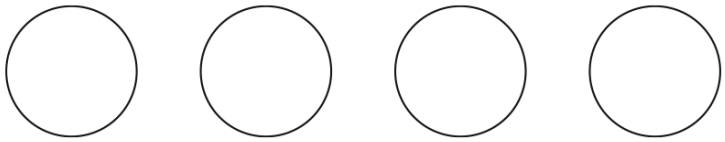
These four discs are arranged to make the number 3854

(a) Arrange the four discs to make the largest possible number.



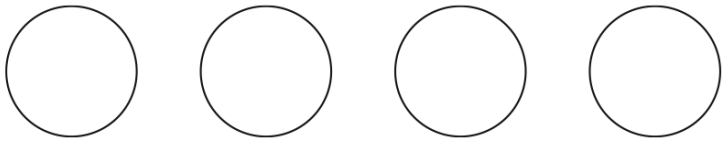
(1)

(b) Arrange the four discs to make a multiple of 5



(1)

(c) Arrange the four discs to make the smallest possible odd number.



(1)

(Total for Question 1 is 3 marks)

15. 4MA1_2FR_que_20180608 Q: 6

(a) Write 1782 correct to the nearest hundred.

.....

(1)

(b) Write the number thirty two thousand and forty five in figures.

.....

(1)

Billy works out the answer to $2 + 5 \times 7$
He says that the answer is 49

Billy is not correct as the answer should be 37

(c) Explain what Billy has done wrong.

.....

.....

(1)

Chen says,

"A prime number added to an even number always gives an odd number."

(d) Give an example to show that Chen is not correct.

.....

(1)

(Total for Question 6 is 4 marks)

16. 4MA0_2F_que_20170117 Q: 1

(a) Write in figures the number thirty five thousand and seventy nine.

.....

(1)

(b) Write down the value of the 7 in the number 4709

.....

(1)

(c) Write down all the factors of 70

.....

(2)

Here is a list of numbers.

3471 5009 855 738 9113 1042 2005

(d) Subtract the smallest number in the list from the largest number in the list.

.....

(2)

(Total for Question 1 is 6 marks)

17. 4MA0_2F_que_20170117 Q: 7

(a) Put brackets in the following to make the calculation correct.

(i) $2 + 4 \times 6 - 3 = 33$

(ii) $2 + 4 \times 6 - 3 = 14$

(2)

(b) Work out the value of $\frac{20 - 4}{2} - \frac{18}{6 - 3}$

.....

(2)

(Total for Question 7 is 4 marks)

18. 4MA0_2FR_que_20170117 Q: 1

The table shows the heights of six mountains.

Mountain	Height (metres)
Aconcagua	6959
Ben Nevis	1344
Kilimanjaro	5895
Bogong	1986
Everest	8848
Steele	5073

(a) What is the smallest odd number in the table?

.....

(1)

(b) Write down the value of the 3 in the number 1344

.....

(1)

The height of Everest is greater than the height of Aconcagua.

(c) How many metres greater?

..... metres

(1)

(Total for Question 1 is 3 marks)

19. 4MA0_2FR_que_20170117 Q: 7

The table shows information about average temperatures for five months in Beijing.

Month	Average temperature (°C)
October	13
November	5
December	−2
January	−4
February	−1

(a) Which of these months has the lowest average temperature?

.....

(1)

(b) Work out the difference between the average temperature in October and the average temperature in December.

..... °C

(2)

The average temperature in June is 28 °C higher than in January.

(c) Work out the average temperature in June.

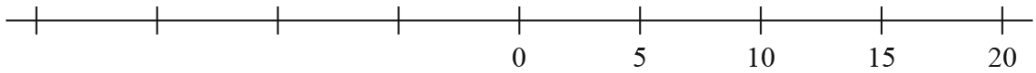
..... °C

(2)

(Total for Question 7 is 5 marks)

20. 4MA0_2FR_que_20170608 Q: 3

Here is an incomplete number line.



....

(a) Write a number on each dotted line to complete the number line.

(1)

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

5 −7 3 −2 8 −4

.....

(1)

In Oymyakon, the average maximum temperature in July is 72 °F.
The average minimum temperature in January is −58 °F.

(c) Work out the difference between 72 °F and −58 °F.

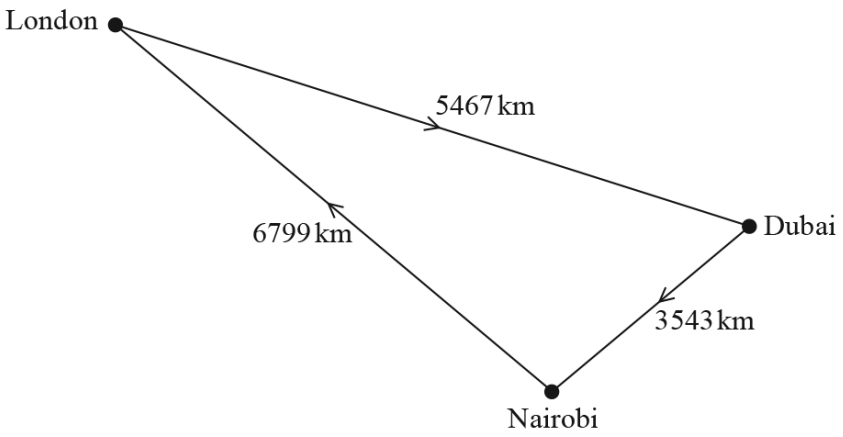
..... °F

(2)

(Total for Question 3 is 4 marks)

21. 4MA0_2F_que_20150604 Q: 2

A plane flies from London to Dubai and then from Dubai to Nairobi.
Then the plane flies from Nairobi back to London.



The plane flies 5467 km from London to Dubai.

(a) Write the number 5467 in words.

.....

(1)

The distance the plane flies from London to Dubai and then to Nairobi is further than the distance the plane flies from Nairobi back to London.

(b) How much further?

..... km

(2)

(Total for Question 2 is 3 marks)

1.2 Fractions

22. 4MA1_2F_que_20220118 Q: 7

$\frac{3}{8}$ of the members of a squash club are children.

$\frac{5}{6}$ of these children are right-handed.

What fraction of the members of the squash club are right-handed children?
Give your answer as a fraction in its simplest form.
Show your working clearly.

.....

(Total for Question 7 is 3 marks)

23. 4MA1_2F_que_20220118 Q: 17

Show that $6\frac{3}{4} \div 2\frac{4}{7} = 2\frac{5}{8}$

(Total for Question 17 is 3 marks)

24. 4MA1_2FR_que_20220118 Q: 16

(a) Show that $\frac{3}{8} \div \frac{27}{32} = \frac{4}{9}$

(2)

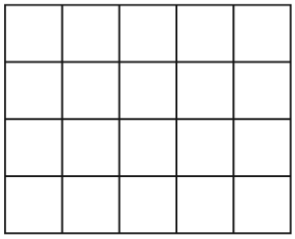
(b) Show that $\frac{5}{6} - \frac{3}{8} = \frac{11}{24}$

(2)

(Total for Question 16 is 4 marks)

25. 4MA1_2F_que_20210430 Q: 5

Here is a shape made of squares.



(a) Shade $\frac{3}{5}$ of the shape.

(1)

(b) Which one of these fractions is **not** equivalent to $\frac{4}{7}$?

$\frac{40}{70}$ $\frac{8}{14}$ $\frac{400}{700}$ $\frac{14}{17}$ $\frac{20}{35}$

.....

(1)

(c) Write $\frac{3}{10}$ as a percentage.

..... %

(1)

(d) Write $\frac{77}{9}$ as a mixed number.

.....

(1)

$\frac{5}{6}$ of a number is 40

(e) What is the number?

.....

(2)

(Total for Question 5 is 6 marks)

26. 4MA1_2F_que_20210430 Q: 16

Show that $2\frac{4}{7} \div 1\frac{1}{8} = 2\frac{2}{7}$

(Total for Question 16 is 3 marks)

27. 4MA1_2F_que_20200305 Q: 19

Show that $4\frac{2}{3} + 3\frac{4}{5} = 8\frac{7}{15}$

(Total for Question 19 is 3 marks)

28. 4MA1_2F_que_20201106 Q: 15

Show that $\frac{2}{5} \div \frac{11}{20} = \frac{8}{11}$

(Total for Question 15 is 2 marks)

29. 4MA1_2FR_que_20201106 Q: 11

Show that $\frac{5}{12} + \frac{3}{8} = \frac{19}{24}$

(Total for Question 11 is 2 marks)

30. 4MA1_2F_que_20190116 Q: 8

(a) Write $\frac{19}{5}$ as a mixed number.

(1)

There are 84 animals in a field.

10 of the animals are horses.
45 of the animals are sheep.
The rest of the animals are cows.

(b) What fraction of the animals in the field are cows?

(2)

(c) Write these fractions in order of size.
Start with the smallest fraction.

$\frac{3}{4}$ $\frac{11}{12}$ $\frac{5}{8}$ $\frac{9}{20}$

(2)

(d) Show that $\frac{23}{24} - \frac{3}{8} = \frac{7}{12}$

(2)

(Total for Question 8 is 7 marks)

31. 4MA1_2F_que_20190607 Q: 5

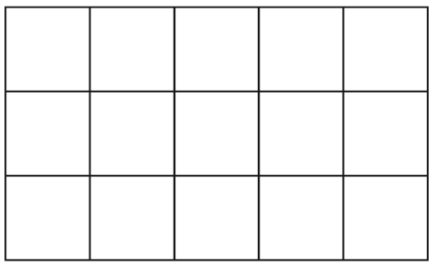
(a) Which one of these fractions is equivalent to $\frac{4}{5}$?

$$\frac{20}{24} \quad \frac{8}{12} \quad \frac{1}{2} \quad \frac{16}{20} \quad \frac{6}{10}$$

.....

(1)

Here is a shape made of squares.



(b) Shade $\frac{4}{5}$ of the shape.

(1)

(c) Write $\frac{4}{5}$ as a percentage.

.....%

(1)

$\frac{4}{5}$ of a number is 48

(d) What is the number?

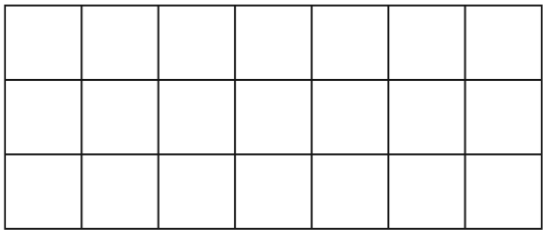
.....

(2)

(Total for Question 5 is 5 marks)

32. 4MA1_2FR_que_20190116 Q: 3

(a) Shade $\frac{3}{7}$ of the rectangle.



(1)

(b) Write $\frac{23}{3}$ as a mixed number.

(1)

(c) Find $\frac{2}{5}$ of 60 cm.

cm

(2)

Claude says that $\frac{1}{6}$ is exactly halfway between $\frac{1}{4}$ and $\frac{1}{8}$

(d) Is Claude correct?
You must give a reason for your answer.

(2)

(Total for Question 3 is 6 marks)

33. 4MA1_2FR_que_20190607 Q: 18

Show that $5\frac{2}{3} - 2\frac{3}{4} = 2\frac{11}{12}$

(Total for Question 18 is 3 marks)

34. 4MA0_2F_que_20180116 Q: 14

(a) Write these fractions in order of size.
Start with the smallest fraction.

$$\frac{5}{12} \qquad \frac{7}{8} \qquad \frac{3}{4} \qquad \frac{1}{2} \qquad \frac{9}{24}$$

.....

(2)

(b) Show that $\frac{2}{7} \div \frac{4}{5} = \frac{5}{14}$

(2)

(c) Show that $3\frac{1}{6} - 1\frac{2}{3} = 1\frac{1}{2}$

(3)

(Total for Question 14 is 7 marks)

35. 4MA1_2F_que_20180608 Q: 20

Show that $3\frac{4}{7} - 1\frac{5}{8} = 1\frac{53}{56}$

(Total for Question 20 is 3 marks)

36. 4MA0_2F_que_20170117 Q: 16

Here is a list of five fractions.

$$\frac{7}{6} \qquad \frac{9}{5} \qquad \frac{3}{7} \qquad \frac{5}{9} \qquad \frac{10}{11}$$

(a) (i) Write down the smallest fraction in the list.

.....

(ii) Write down the largest fraction in the list.

.....

(2)

(b) Complete the statement below to show a fraction that is equivalent to $\frac{5}{9}$

$$\frac{5}{9} = \frac{\ldots\ldots}{63}$$

(1)

(Total for Question 16 is 3 marks)

37. 4MA0_2F_que_20170608 Q: 7

(a) Which one of these fractions is equivalent to $\frac{2}{3}$?

$$\frac{9}{15} \qquad \frac{10}{12} \qquad \frac{8}{9} \qquad \frac{12}{18} \qquad \frac{20}{24}$$

.....

(1)

(b) Work out $\frac{3}{7}$ of 840 kg.

..... kg

(2)

There are 240 cars in a car park.
96 of these cars are red.

(c) What fraction of the cars in the car park are red?
Give your fraction in its simplest form.

.....

(2)

$\frac{2}{9}$ of a number is 8

(d) What is the number?

.....

(2)

(Total for Question 7 is 7 marks)

38. 4MA0_2F_que_20170608 Q: 20

(a) Show that $\frac{7}{12} + \frac{3}{8} = \frac{23}{24}$

(2)

(b) Show that $1\frac{2}{3} \times 2\frac{1}{15} = 3\frac{4}{9}$

(3)

(Total for Question 20 is 5 marks)

39. 4MA0_2FR_que_20170608 Q: 24

Show that $3\frac{1}{5} \div 2\frac{2}{3} = 1\frac{1}{5}$

(Total for Question 24 is 3 marks)

40. 4MA0_2F_que_20150604 Q: 1

(a) Write a number in each box so that each calculation is correct.

(i) $65 \times \square = 65\,000$

(ii) $4.56 \div \square = 0.0456$

(2)

(b) Here is a list of numbers.

–5 3 –7 4 1

Write down the smallest number in the list.

.....

(1)

(c) Write down all the factors of 28

.....

(2)

(d) Which two of the following numbers are prime numbers?

2 9 14 15 18 23 30

..... and .....

(2)

(Total for Question 1 is 7 marks)

41. 4MA0_2F_que_20150604 Q: 11

(a) Write these fractions in order of size.
Start with the smallest fraction.

$$\frac{5}{8} \qquad \frac{3}{4} \qquad \frac{7}{16} \qquad \frac{2}{3}$$

.....

(2)

(b) There are 120 animals in a zoo.
7 of these animals are lions.

What fraction of the animals in the zoo are **not** lions?

.....

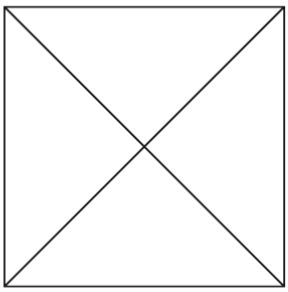
(2)

(Total for Question 11 is 4 marks)

1.3 Decimals

42. 4MA1_2F_que_20220118 Q: 1

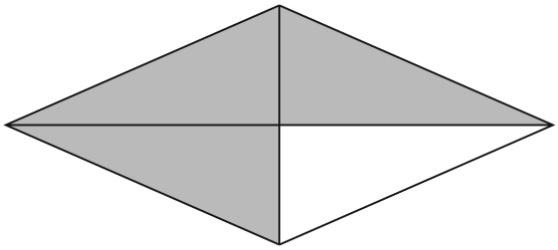
The diagram shows a square and its diagonals.



(a) Shade $\frac{1}{4}$ of the square.

(1)

Here is a rhombus.



(b) What fraction of the rhombus is shaded?

.....

(1)

(c) Write 0.9 as a fraction.

.....

(1)

(Total for Question 1 is 3 marks)

43. 4MA1_2F_que_20211105 Q: 2

(a) Write these numbers in order of size.
Start with the smallest number.

2.12 2.19 2.07 2.1 2.001

.....

(1)

(b) Write down the value of 6 in the number 54.623

.....

(1)

(c) Write the number 3.4896 correct to 2 decimal places.

.....

(1)

(d) Write 0.6 as a percentage.

.....%

(1)

(Total for Question 2 is 4 marks)

44. 4MA1_2F_que_20200305 Q: 2

(a) Write these decimals in order of size.
Start with the smallest decimal.

0.501 0.51 0.5 0.55

.....

(1)

(b) Write 0.3 as a fraction.

.....

(1)

(c) Write 0.46832 correct to 2 decimal places.

.....

(1)

(Total for Question 2 is 3 marks)

45. 4MA1_2F_que_20201106 Q: 5

(a) Write these decimals in order of size.
Start with the smallest decimal.

0.9 0.035 0.003 0.539 0.5

.....

(1)

(b) Write 0.6 as a percentage.

.....%

(1)

(c) Write $\frac{60}{7}$ as a mixed number.

.....

(1)

(d) Work out the difference between $\frac{19}{20}$ and 0.68

Give your answer as a decimal.

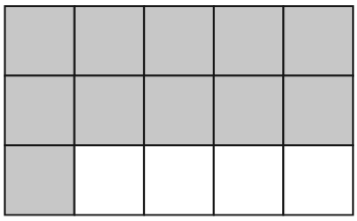
.....

(2)

(Total for Question 5 is 5 marks)

46. 4MA1_2FR_que_20200305 Q: 4

Here is a shape made from squares.



(a) What fraction of this shape is shaded?

.....

(1)

(b) Write $\frac{23}{5}$ as a mixed number.

.....

(1)

(c) Write 0.23 as a fraction.

.....

(1)

(d) Write $\frac{2}{5}$ as a decimal.

.....

(1)

(e) Write these decimals in order of size.
Start with the smallest decimal.

3.61 3.9 3.555 3.82 3.7

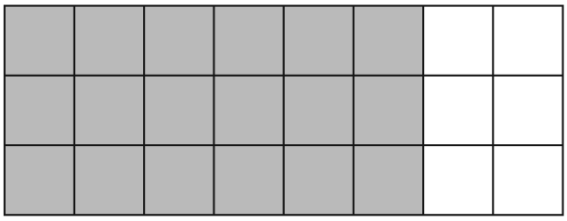
.....

(1)

(Total for Question 4 is 5 marks)

47. 4MA0_2F_que_20180116 Q: 1

Here is a shape made from squares.



(a) What fraction of this shape is shaded?
Give your fraction in its simplest form.

.....

(2)

$\frac{3}{10}$ of a triangle is shaded.

(b) What fraction of the triangle is **not** shaded?

.....

(1)

(c) Write 0.047 as a fraction.

.....

(1)

(d) Write $3\frac{1}{4}$ as a decimal number.

.....

(1)

(Total for Question 1 is 5 marks)

48. 4MA0_2FR_que_20180608 Q: 4

(a) Write the number **six thousand and seventy nine** in digits.

.....

(1)

(b) Write down the value of the 4 in the number 9417

.....

(1)

(c) Write the number 72.163 correct to 1 decimal place.

.....

(1)

(d) Write down two multiples of 18

..... and .....

(1)

(e) Write 0.7 as a percentage.

.....%

(1)

(f) Write brackets in this calculation so that the answer is correct.

$$25 + 3 \times 7 - 2 = 40$$

(1)

Here is a list of numbers.

9235 9842 6386 8607 9417

(g) Write down the smallest odd number in the list.

.....

(1)

(Total for Question 4 is 7 marks)

49. 4MA1_2F_que_20180608 Q: 1

(a) Write 0.63 as a fraction.

.....

(1)

(b) Write 46 821 correct to the nearest 100

.....

(1)

(c) Write 73.654 correct to 1 decimal place.

.....

(1)

(d) Write 0.09 as a percentage.

.....%

(1)

(Total for Question 1 is 4 marks)

Appendix A

Answers

1. 4MA1_2F_rms_20220118 Q: 4

Q	Working	Answer	Mark	Notes
(a)		Qatar	1	B1
(b)		9	1	B1 allow −9
(c)		−4	1	B1
				Total 3 marks

2. 4MA1_2FR_rms_20220118 Q: 1

Q	Working	Answer	Mark	Notes
(a)		El Salvador	1	B1
(b)		400	1	B1 Allow hundred oe
(c)		Bahamas & Syria	1	B1
(d)		Three thousand, three hundred and seventy one	1	B1
				Total 4 marks

3. 4MA1_2F_rms_20210304 Q: 3

Question	Working	Answer	Mark	Notes
(a)		14	1	B1
(b)		−19	1	B1
				Total 2 marks

4. 4MA1_2F_rms_20210430 Q: 1

Question	Working	Answer	Mark	Notes
(a)		Pacific	1	B1 Allow P or incorrect spelling so long as meaning is clear Allow 135 663
(b)		Seventeen thousand nine hundred [and] sixty eight	1	B1 Must be all in words – allow incorrect spelling as long as meaning is clear, eg thosand, hunded, hunder, etc
(c)		67 000	1	B1 or '67 thousand'
(d)		181 052	1	B1 cao
				Total 4 marks

5. 4MA1_2FR_rms_20210304 Q: 1

Q	Working	Answer	Mark	Notes
(a)		12 348	1	B1
(b)		84 312	1	B1
(c)		1,3	2	B2 for both correct values -1 eeoo
(d)		2,3	2	B2 for both correct values -1 eeoo
				Total 6 marks

6. 4MA1_2F_rms_20200305 Q: 1

Q	Working	Answer	Mark	Notes
(i)		13 or 23	1	B1
(ii)		36	1	B1
(iii)		14	1	B1
				Total 3 marks

7. 4MA1_2F_rms_20200305 Q: 11

Q	Working	Answer	Mark	Notes
(a)(i)		<	1	B1 for <
(ii)		>	1	B1 for >
(b)		Neon	1	B1 for neon
(c)		Mercury	1	B1 for mercury
(d)	(−35 − − 101) ÷ 10 (=±6.6) **or** ±66 ÷ 10 (= ±6.6) **or** (−35 − − 101) ÷ 5 **or** ±66 ÷ 5 **or** clearly showing counting down from −35 to −95 in 10's or 5's and indicating times by the side **or** from 35 to 95 in 10's or 5's and indicating times by the side with at most one error **or** −95 = 12 mins **or** −100 = 13 mins **or** −105 = 14 mins **or** a correct method to get 66 **and** one of 60 = 12 mins **or** 65 = 13 mins **or** 70 = 14 mins **or** a correct method to get 66 **and** clearly showing counting up or down in 10's or 5's **or** an answer of 13 **or** 14 **or** 13.12		2	M1
		13.2		A1 for 13.2 or 13 minutes 12 seconds
				Total 6 marks

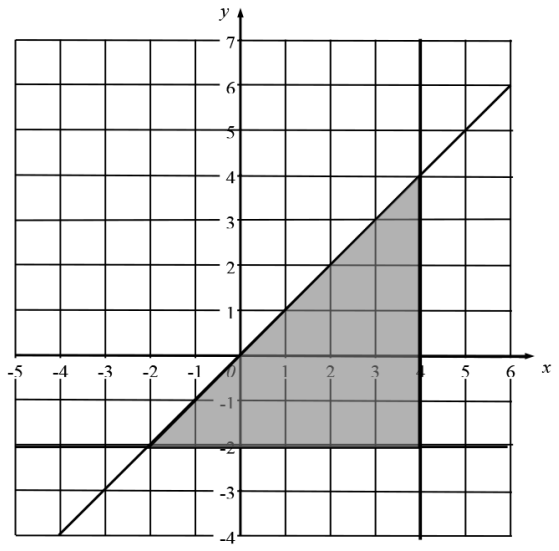
8. 4MA1_2F_rms_20201106 Q: 4

Q	Working	Answer	Mark	Notes
a		New York	1	B1 accept −15
b		25	1	B1 accept −25
c		−28	1	B1
				Total 3 marks

9. 4MA1_2FR_rms_20201106 Q: 1

Q	Working	Answer	Mark	Notes
(a)		Tonga	1	B1 cao
(b)		5 hundred(s)	1	B1 for 5 hundred(s) or 500
(c)		four thousand, four hundred and thirty seven	1	B1 all numbers must be as words
(d)		8458	1	B1 cao
(e)	8047 + 2864		2	M1 for 'any value from table' + 2864
		10 911		A1 cao
				Total 6 marks

Appendix 1



10. 4MA1_2FR_rms_20190116 Q: 5

Question	Working	Answer	Mark	Notes	
(a)		−6, −5, −4, 8 10	1	B1	
(b)		15	1	B1	Allow −15
(c)		1	1	B1	
(d)		−14	1	B1	

11. 4MA1_2FR_rms_20190607 Q: 1

Question		Working	Answer	Mark	Notes	
	(a)		Nine thousand two hundred and eighty	1	B1	
	(b)		New York	1	B1	
	(c)		700	1	B1	
	(d)		Kolkata	1	B1	
	(e)		17 000	1	B1	
						Total 5 marks

12. 4MA0_2FR_rms_20180116 Q: 13

Question	Working	Answer	Mark	Notes	
(a)	190 ÷ 12 or 15.8(333....)	15	2	M1	For 15 × 12 (=180) or 16 × 12 (=192)
				A1	
(b)	190 − 15×12 or 190 − 180 or 0.8(333…) × 12	10	2	M1ft	Provided answer in (a) is an integer less than 15
				A1	

13. 4MA1_2F_rms_20180608 Q: 5

Question	Working	Answer	Mark	Notes	
(a)		24	1	B1	Accept 32 or 40 or 48
(b)		2	1	B1	
(c)		No It is divisible by 3	1	B1	Only consider reason if No is given. Allow any reason that shows a clear understanding of why 57 is not prime, eg it is divisible by 19 **or** 3 **or** equal to 3 × 19.
					Total 3 marks

14. 4MA1_2FR_rms_20180608 Q: 1

Question	Working	Answer	Mark	Notes
(a)		8543	1	B1
(b)		4 digits ending in 5	1	B1 e.g. 3845, 8345 etc
(c)		3485	1	B1
				Total 3 marks

15. 4MA1_2FR_rms_20180608 Q: 6

Question	Working	Answer	Mark	Notes
(a)		1800	1	B1
(b)		32 045	1	B1
(c)	2 + 5 × 7 = 2 + 35	Correct statement	1	B1 e.g. Billy should have done 5×7 and added 2 to the answer to this.
(d)		Correct sum	1	B1 e.g. 2 + 4= 6 (2 added to any even number)
				Total 4 marks

16. 4MA0_2F_rms_20170117 Q: 1

Q	Working	Answer	Mark	Notes
(a)		35079	1	B1
(b)		700	1	B1 or (seven) hundreds
(c)		1, 2, 5, 7, 10, 14, 35, 70	2	B2 Award B1 for any four correct factors.
(d)	9113 − 738		2	M1 for using 9113 and 738
		8375		A1 cao
				Total 6 marks

17. 4MA0_2F_rms_20170117 Q: 7

Q	Working	Answer	Mark	Notes
(a) (i)		$(2+4)\times6-3$	2	B1
(ii)		$2+4\times(6-3)$		B1
(b)	Eg $\frac{16}{2}-\frac{18}{3}$ or $8-6$ or $\frac{48}{6}$ or $\frac{12}{6}$		2	M1 For a complete method
		2		A1 cao
				Total 4 marks

18. 4MA0_2FR_rms_20170117 Q: 1

Q	Working	Answer	Mark	Notes
(a)		5073	1	B1
(b)		300	1	B1
(c)		1889	1	B1
				Total 3 marks

19. 4MA0_2FR_rms_20170117 Q: 7

Q	Working	Answer	Mark	Notes
(a)		January	1	B1 Accept – 4
(b)	13 − − 2	15	2	M1 Accept −2 − 13 A1 Accept −15
(c)	−4 + 28 or 28 − 4	24	2	M1 Accept 28 + −4 A1
				Total 5 marks

20. 4MA0_2FR_rms_20170608 Q: 3

Q	Working	Answer	Mark	Notes
(a)		−20,−15,−10,−5	1	B1 Numbers all correctly marked
(b)		−7,−4,−2, 3 ,5 ,8	1	B1 All correctly ordered
(c)	72 + 58 or 72 − −58 or −58 − 72	130	2	M1 For a complete method A1 Allow −130
				Total 4 marks

21. 4MA0_2F_rms_20150604 Q: 2

Question	Working	Answer	Mark	Notes
(a)	five thousand, four hundred and sixty seven		1	B1
(b)	5467 + 3543 – 6799 oe		2	M1
		2211		A1
				Total 3 marks

22. 4MA1_2F_rms_20220118 Q: 7

Q	Working		Answer	Mark	Notes
	$\frac{3}{8}\times\frac{5}{6}$ oe eg $0.375 \div 6 \times 5$ Allow $0.375 \times 0.83\ldots$ oe	eg $\frac{3}{8}\times 48 = 18$ **and** eg $\frac{5}{6}\times 18 = 15$		3	M1 for showing intention to multiply the two given fractions **or** using a number of members that is a multiple of 48 to work out the number of right-handed children.
	eg $\frac{3}{8}\times\frac{5}{6}=\frac{15}{48}$ **or** $\frac{\cancel{3}^{1}}{8}\times\frac{5}{\cancel{6}^{2}}$ $0.375 \times 0.83\ldots = 0.31\ldots..$	$\frac{\text{"15"}}{\text{"48"}}$			M1 For an attempt to multiply fractions **or** Dividing their 15 by their 48
			$\frac{5}{16}$		A1 dep on M1
					Total 3 marks

23. 4MA1_2F_rms_20220118 Q: 17

Q	Working	Answer	Mark	Notes
	eg $\frac{27}{4}$ **and** $\frac{18}{7}$		3	M1 Both fractions expressed as improper fractions.
	$\frac{27}{4}\times\frac{7}{18}$ oe **or** eg $\frac{189}{28}\div\frac{72}{28}$			M1 for both fractions expressed as equivalent fractions with denominators that are a common multiple of 4 and 7 (seeing this stage gains M2)
	eg $\frac{27}{4}\times\frac{7}{18}=\frac{189}{72}=\frac{21}{8}=2\frac{5}{8}$ **or** $\frac{27}{4}\times\frac{7}{18}=\frac{189}{72}=2\frac{45}{72}=2\frac{5}{8}$ **or** $\frac{\cancel{27}^{3}}{4}\times\frac{7}{\cancel{18}^{2}}=\frac{21}{8}=2\frac{5}{8}$ **or** $\frac{189}{28}\div\frac{72}{28}=\frac{189}{72}=2\frac{45}{72}=2\frac{5}{8}$ oe if the student clearly shows $2\frac{5}{8}=\frac{21}{8}$ then they only need to complete the LHS to $\frac{21}{8}$ (often done in 1st line of working)	shown		A1 dep M2 conclusion to $2\frac{5}{8}$ from correct working – either sight of the result of the multiplication e.g. $\frac{189}{72}$ must be seen then cancelled or correct cancelling prior to the multiplication with $\frac{21}{8}$ seen. NB entire solution using decimals scores no marks.
				Total 3 marks

24. 4MA1_2FR_rms_20220118 Q: 16

Q	Working	Answer	Mark	Notes
(a)	eg $\frac{3}{8}\times\frac{32}{27}$ **or** $\frac{12}{32}\div\frac{27}{32}$		2	M1 Inverting $\frac{27}{32}$ and changing to multiply **or** writing both factions with the same denominator.
	eg $\frac{3}{8}\times\frac{32}{27}=\frac{96}{216}=\frac{4}{9}$ **or** $\frac{12}{32}\div\frac{27}{32}=\frac{12}{27}=\frac{4}{9}$ **or** eg $\frac{\cancel{3}^{1}}{\cancel{8}_{1}}\times\frac{\cancel{32}^{4}}{\cancel{27}_{9}}=\frac{4}{9}$	Shown		A1 Conclusion to $\frac{4}{9}$ - either sight of the result of the multiplication eg $\frac{96}{216}$ or $\frac{48}{108}$ or $\frac{24}{54}$ must be seen **or** fully correct cancelling must be seen prior to multiplication NB use of decimals scores no marks.
(b)	eg $\frac{40}{48}-\frac{18}{48}$ or $\frac{20}{24}-\frac{9}{24}$		2	M1 for correct fractions with a common denominator of 24 or a multiple of 24
	eg $\frac{40}{48}-\frac{18}{48}=\frac{22}{48}=\frac{11}{24}$ or $\frac{20}{24}-\frac{9}{24}=\frac{11}{24}$	Shown		A1 dep M1 for a correct answer from fully correct working.
				Total 4 marks

25. 4MA1_2F_rms_20210430 Q: 5

Question	Working	Answer	Mark	Notes
(a)		12 squares shaded	1	B1 can be any 12 squares shaded – use professional judgement as to whether a square is shaded or not
(b)		$\frac{14}{17}$	1	B1 with no others may be indicated in list
(c)		30	1	B1
(d)		$8\frac{5}{9}$	1	B1
(e)	$40\div5\times6$ oe eg $\frac{6}{5}\times40$ oe		2	M1 A fully correct method
	Working not required, so correct answer scores full marks (unless from obvious incorrect working)	48		A1 trial and improvement scores no marks unless fully correct
				Total 6 marks

26. 4MA1_2F_rms_20210430 Q: 16

Question	Working	Answer	Mark	Notes
	eg $\frac{18}{7}$ **and** $\frac{9}{8}$ oe		3	M1 both fractions expressed as improper fractions, no need for ÷ or × may be equivalent to those given eg $\frac{36}{14}$ or $\frac{27}{24}$ etc. A student could invert $\frac{9}{8}$ and go straight to the 2nd M1, this mark is then implied.
	eg $\frac{18}{7}\times\frac{8}{9}$ oe **or** $\frac{144}{56}\div\frac{63}{56}$ oe			M1 **or** for both fractions expressed as equivalent fractions with denominators that are a common multiple of 7 and 8 eg $\frac{144}{56}\div\frac{63}{56}$
	eg $\frac{18}{7}\times\frac{8}{9}=\frac{144}{63}=\frac{16}{7}=2\frac{2}{7}$ **or** $\frac{18}{7}\times\frac{8}{9}=\frac{144}{63}=2\frac{18}{63}=2\frac{2}{7}$ **or** $\frac{\cancel{18}^{2}}{7}\times\frac{8}{\cancel{9}^{1}}=\frac{16}{7}=2\frac{2}{7}$ **or** $\frac{18}{7}\div\frac{9}{8}=\frac{144}{56}\div\frac{63}{56}=\frac{144}{63}=\frac{16}{7}=2\frac{2}{7}$ **or** correct working to $\frac{16}{7}$ **and** writing $2\frac{2}{7}=\frac{16}{7}$	shown		A1 Dep on M2 for conclusion to $2\frac{2}{7}$ from correct working – either sight of the result of the multiplication or division e.g. $\frac{144}{63}$ must be seen or correct cancelling prior to the multiplication to $\frac{16}{7}$ **or** writing $2\frac{2}{7}=\frac{16}{7}$ (maybe on first line of working) and correct working as far as LHS $=\frac{16}{7}$ **NB: use of decimals scores no marks**
				Total 3 marks

27. 4MA1_2F_rms_20200305 Q: 19

Q	Working	Answer	Mark	Notes
	$\frac{14}{3}(+)\frac{19}{5}$ or $(4)\frac{10}{15}(+)(3)\frac{12}{15}$ or $(4)\frac{10a}{15a}(+)(3)\frac{12a}{15a}$		3	M1 for correct improper fractions or fractional part of numbers written correctly over a common denominator
	eg $\frac{14\times5+19\times3}{3\times5}$ or $\frac{70}{15}+\frac{57}{15}$ or $\frac{70a}{15a}+\frac{57a}{15a}$ or $4\frac{10}{15}+3\frac{12}{15}=7\frac{22}{15}$ oe			M1 for correct fractions with a common denominator of 15 or a multiple of 15
	$\frac{70}{15}+\frac{57}{15}=\frac{127}{15}=8\frac{7}{15}$ or $7\frac{22}{15}=8\frac{7}{15}$ or if shows $8\frac{7}{15}=\frac{127}{15}$ at the beginning then show that the addition comes to $\frac{127}{15}$	Shown		A1 dep on M2 for a correct answer from fully correct working **or** shows that RHS $=\frac{127}{15}$ **and** fully correct working shows LHS $=\frac{127}{15}$
				Total 3 marks

28. 4MA1_2F_rms_20201106 Q: 15

Q	Working	Answer	Mark	Notes
	$\frac{2}{5}\times\frac{20}{11}$ or eg $\frac{8}{20}\div\frac{11}{20}$		2	M1 For inverting $\frac{11}{20}$ and a clear intention to multiply or for writing both fractions correctly over the same common denominator
	$\frac{2}{5}\times\frac{20}{11}=\frac{40}{55}=\frac{8}{11}$ or $\frac{2}{\cancel{5}^{1}}\times\frac{\cancel{20}^{4}}{11}=\frac{8}{11}$ or $\frac{8}{20}\div\frac{11}{20}=\frac{8}{11}$	Clearly shown		A1 dep on M1 continued to clearly show given result
				Total 2 marks

29. 4MA1_2FR_rms_20201106 Q: 11

Q	Working	Answer	Mark	Notes
	$\frac{10}{24}+\frac{9}{24}$ or $\frac{10n}{24n}+\frac{9n}{24n}$ or eg $\frac{40+36}{96}$ $\left(=\frac{76}{96}\right)$		2	M1 for writing a sum, and each fraction with a common denominator, eg $\frac{10}{24}+\frac{9}{24}$
	$\frac{10}{24}+\frac{9}{24}=\frac{19}{24}$ or eg $\frac{40+36}{96}=\frac{76}{96}=\frac{19}{24}$	clearly shown		A1 dep on M1 continued to clearly show given result
				Total 2 marks

30. 4MA1_2F_rms_20190116 Q: 8

Question	Working	Answer	Mark	Notes
(a)		$3\frac{4}{5}$	1	B1
(b)	84 – 10 – 45 (=29)		M1	
		$\frac{29}{84}$	2	A1 SCB1 for $\frac{55}{84}$
(c)	0.75, 0.916…, 0.625, 0.45		M1	for conversion to common form
		$\frac{9}{20},\frac{5}{8},\frac{3}{4},\frac{11}{12}$	2	A1 SC :if M0 award B1 for any 3 fractions in the correct order or for all fractions in correct reverse order
(d)	$\frac{23}{24}-\frac{9}{24}$ oe		M1	for two fractions with a common denominator with at least one numerator correct
		shown	2	A1 for $\frac{14}{24}$ oe and then $\frac{7}{12}$

31. 4MA1_2F_rms_20190607 Q: 5

Question		Working	Answer	Mark	Notes
	(a)		$\frac{16}{20}$	1	B1
	(b)		12 squares shaded	1	B1
	(c)		80	1	B1
	(d)	48 ÷ 4 × 5 **or** 48 × 5 ÷ 4 **or** 48 ÷ 0.8 **or** 48 × 1.25 oe			M1 for a complete method
			60	2	A1
					Total 5 marks

32. 4MA1_2FR_rms_20190116 Q: 3

Question	Working	Answer	Mark	Notes
(a)		9 squares shaded	1	B1
(b)		$7\frac{2}{3}$	1	B1
(c)	60 ÷ 5 or 12 or 2 × 60 or 120		2	M1
		24		A1
(d)	$\frac{1}{4}=\frac{4}{16}$ *and* $\frac{1}{8}=\frac{2}{16}$ oe or $\frac{1}{4}=\frac{6}{24}$ *and* $\frac{1}{8}=\frac{3}{24}$ *and* $\frac{1}{6}=\frac{4}{24}$ oe		2	M1 or use of decimals for 0.25 and 0.125
		Correct conclusion based on correct figures		A1 e.g. $\frac{3}{16}$ is halfway between $\frac{1}{4}$ *and* $\frac{1}{8}$ ($\frac{3}{16}\neq\frac{1}{6}$) oe or using second method above, 4 is not halfway between 3 and 6 or 0.1875, 0.16666… and No

33. 4MA1_2FR_rms_20190607 Q: 18

Question	Working	Answer	Mark	Notes
	$\frac{17}{3}(-)\frac{11}{4}$ oe or $5\frac{8}{12}(-)2\frac{9}{12}$ $\frac{68}{12}-\frac{33}{12}$ or $4\frac{20}{12}-2\frac{9}{12}$ $\frac{35}{12}=2\frac{11}{12}$		3	M1 Sight of $\frac{17}{3}$ and $\frac{11}{4}$ or $5\frac{8}{12}$ and $2\frac{9}{12}$ M1 or $\frac{68n}{12n}-\frac{33n}{12n}$ A1 Dep on M2
	Alt: $3\ (+)(\frac{2}{3}-\frac{3}{4})$ $3\ (+)(\frac{8}{12}-\frac{9}{12})$ $3-\frac{1}{12}=2\frac{11}{12}$			M1 M1 A1 Dep on M2
	Alt: $4\frac{5}{3}-2\frac{3}{4}$ $2\ (+)(\frac{5}{3}-\frac{3}{4})$ $2\ (+)(\frac{20}{12}-\frac{9}{12})$ $=2\frac{11}{12}$			M1 M1 M1 Dep on M2 A1

Question	Working	Answer	Mark	Notes
				Total 3 marks

34. 4MA0_2F_rms_20180116 Q: 14

Question	Working	Answer	Mark	Notes
(a)	eg. $\frac{10}{24}$ $\frac{21}{24}$ $\frac{18}{24}$ $\frac{12}{24}$ $\frac{9}{24}$ **or** 0.416..., 0.875, 0.75, 0.5, 0.375	$\frac{9}{24}$ $\frac{5}{12}$ $\frac{1}{2}$ $\frac{3}{4}$ $\frac{7}{8}$	2	M1 correct conversion of at least 3 fractions into the same form (common denominators or decimals) **or** at least 4 fractions in correct order in answer A1

Question	Working	Answer	Mark	Notes
(b)	$\frac{2}{7}\times\frac{5}{4}$ $\frac{2}{7}\times\frac{5}{4}=\frac{10}{28}=\frac{5}{14}$ or show cancelling giving $\frac{1}{7}\times\frac{5}{2}=\frac{5}{14}$ **Alternative method** $\frac{10}{35}\div\frac{28}{35}$ oe $\frac{10}{28}=\frac{5}{14}$ oe $\frac{2}{4}=0.5\ \frac{7}{5}=1.4$ $\frac{0.5}{1.4}=\frac{5}{14}$	$\frac{5}{14}$ $\frac{5}{14}$	2 2	M1 A1 answer from correct working with $\frac{10}{28}$ oe seen or $\frac{5}{14}$ from correct cancelling M1 A1 answer from correct working with $\frac{10}{28}$ oe seen or from use of decimals with $\frac{0.5}{1.4}$ seen.
(c)	eg $\frac{19}{6}-\frac{5}{3}$ eg $\frac{19}{6}-\frac{10}{6}$ eg $\frac{9}{6}=1\frac{3}{6}\left(\frac{3}{2}\right)=1\frac{1}{2}$ (2) $\frac{1}{6}-\frac{4}{6}$ $2-\frac{3}{6}$ $1\frac{3}{6}=1\frac{1}{2}$ $3\frac{1}{6}-1\frac{4}{6}$ $2-\frac{3}{6}$ $1\frac{3}{6}=1\frac{1}{2}$ $\frac{7}{6}-\frac{4}{6}$ $1\frac{7}{6}-\frac{4}{6}$ $1\frac{3}{6}=1\frac{1}{2}$	$1\frac{1}{2}$	3	M1 common denominator used for subtraction **or** improper fractions M1 Method which would lead to $\frac{9}{6}$ oe or $1\frac{3}{6}$ oe dep on first M1 A1 answer from correct working with all steps seen

35. 4MA1_2F_rms_20180608 Q: 20

Question	Working	Answer	Mark	Notes
	$\frac{25}{7}$ and $\frac{13}{8}$		3	M1 correct improper fractions **or** two improper fractions with a common denominator, at least one correct
	eg $\frac{200}{56}-\frac{91}{56}$ *or* $\frac{8\times25}{56}-\frac{7\times13}{56}$			M1 two correct fractions with a common denominator
	$\frac{109}{56}=1\frac{53}{56}$ Or $\frac{109}{56}$ with RHS shown as $\frac{109}{56}$	correctly shown		A1 dep on M2 with sight of the result of the subtraction eg $\frac{109}{56}$ and $1\frac{53}{56}$ but allow showing that $1\frac{53}{56}=\frac{109}{56}$ on RHS in working
	Alternative method			
	eg $(3)\frac{32}{56}-(1)\frac{35}{56}$		3	M1 two improper fractions with a common denominator, at least one correct
	$-\frac{3}{56}$			M1 correct subtraction of fractional parts
		correctly shown		A1 dep on M2 with sight of the result of the subtraction eg $\frac{109}{56}$ or $2-\frac{3}{56}$
	Alternative method			
	eg $3\frac{32}{56}-1\frac{35}{56}$		3	M1 two correct fractions with a common denominator, at least one correct
	eg $2\frac{88}{56}-1\frac{35}{56}$			M1 complete correct method
		correctly shown		A1 dep on M2
				Total 3 marks

36. 4MA0_2F_rms_20170117 Q: 16

Q	Working	Answer	Mark	Notes
(a) (i)		$\frac{3}{7}$	1	B1
(ii)		$\frac{9}{5}$	1	B1
(b)		35	1	B1
				Total 3 marks

37. 4MA0_2F_rms_20170608 Q: 7

Q	Working	Answer	Mark	Notes
(a)		$\frac{12}{18}$	1	B1 cao
(b)	$840\div7\times3$ or $\frac{3}{7}\times840$ oe			M1 Allow $840\times0.42(85...)$
		360	2	A1 cao
(c)	$\frac{96}{240}$ oe e.g. $\frac{48}{120}, \frac{24}{60}, \frac{8}{20}$, etc			M1
		$\frac{2}{5}$	2	A1 cao
(d)	$8\div2\times9$ or $\frac{9}{2}\times8$ oe			M1
		36	2	A1 cao
				Total 7 marks

38. 4MA0_2F_rms_20170608 Q: 20

Q	Working	Answer	Mark	Notes
(a)	eg. $\frac{14}{24}+\frac{9}{24}$ **or** $\frac{56}{96}+\frac{36}{96}$ oe			M1 correct fractions with common denominators and intention to add
	$\frac{14}{24}+\frac{9}{24}=\frac{23}{24}$ **or** $\frac{56}{96}+\frac{36}{96}=\frac{92}{96}=\frac{23}{24}$ oe	shown	2	A1 dep on M1
(b)	$\frac{5}{3}\times\frac{31}{15}$ oe			M1 fractions written as correct improper fractions and intention to multiply
	$\frac{1}{3}\times\frac{31}{3}$ **or** $\frac{155}{45}$ oe			M1 correct cancelling or multiplication of numerators and denominators without cancelling
	$\frac{1}{3}\times\frac{31}{3}=\frac{31}{9}$ **or** $\frac{155}{45}=\frac{31}{9}$ **or** $3\frac{20}{45}$ oe	shown	3	A1 $\frac{31}{9}$ or $3\frac{20}{45}$ dep on M2
				Total 5 marks

39. 4MA0_2FR_rms_20170608 Q: 24

Q	Working	Answer	Mark	Notes
	$\frac{16}{5}$ and $\frac{8}{3}$	A fully correct method shown	3	M1 For at least one correct improper fraction
	$\frac{16}{5}\times\frac{3}{8}$ **or** $\frac{48}{15}\div\frac{40}{15}$			M1 Dep For first fraction unchanged, changing ÷ to × and inverting the 2nd fraction **or** Converting each fraction with a common denominator of 15 (or multiple of 15) with ÷ sign
				A1 $\frac{48}{40}$ from correct working
				Total 3 marks

40. 4MA0_2F_rms_20150604 Q: 1

Question	Working	Answer	Mark	Notes
(a)(i)		1000	2	B1
(a)(ii)		100		B1
(b)		−7	1	B1
(c)		1,2,4,7,14,28	2	B2 B1 for at least 3 correct factors and none incorrect, may be seen as product pairs; ignore repeats; ignore negatives. Allow 1 mark if all correct and at most 1 incorrect.
(d)		2, 23	2	B2 B1 for 2 or 23; if more than 2 given, -1 for each incorrect value
				Total 7 marks

41. 4MA0_2F_rms_20150604 Q: 11

Question	Working	Answer	Mark	Notes
(a)	$\frac{5}{8}=0.625$ $\frac{3}{4}=0.75$ $\frac{7}{16}=0.4375$ $\frac{2}{3}=0.666..$	$\frac{7}{16}$ $\frac{5}{8}$ $\frac{2}{3}$ $\frac{3}{4}$	2	B2 for $\frac{7}{16}$ $\frac{5}{8}$ $\frac{2}{3}$ $\frac{3}{4}$ **or** for correct decimal equivalents in correct order **or** for correct fraction equivalents in correct order If not B2, then B1 for: • 3 fractions in correct order **or** • 2 fractions correctly converted to decimals or percentages (at least 2 sf rounded or truncated) **or** • 2 fractions expressed as equivalent fractions with a denominator of 48 (or a multiple of 48) SC: B1 for $\frac{3}{4}$ $\frac{2}{3}$ $\frac{5}{8}$ $\frac{7}{16}$ (reverse order)
(b)			2	M1 for $\frac{x}{120}$ with $x < 120$ or B1 for $\frac{113}{y}$ with $y > 113$
		$\frac{113}{120}$		A1
				Total 4 marks

42. 4MA1_2F_rms_20220118 Q: 1

Q	Working	Answer	Mark	Notes
(a)		one triangle fully shaded	1	B1 or one quarter of the square shaded (ignoring diagonal lines).
(b)		$\frac{3}{4}$	1	B1 oe
(c)		$\frac{9}{10}$	1	B1 oe
				Total 3 marks

43. 4MA1_2F_rms_20211105 Q: 2

Q	Working	Answer	Mark	Notes
(a)		2.001, 2.07, 2.1, 2.12, 2.19	1	B1 cao
(b)		6 tenths	1	B1 oe eg tenths, six tenths, $\frac{6}{10}$ (do not allow 0.6 or .6)
(c)		3.49	1	B1 cao
(d)		60	1	B1 cao
				Total 4 marks

44. 4MA1_2F_rms_20200305 Q: 2

Q	Working	Answer	Mark	Notes
(a)		0.5, 0.501, 0.51, 0.55	1	B1
(b)		$\frac{3}{10}$	1	B1 for $\frac{3}{10}$ oe eg $\frac{30}{100}$
(c)		0.47	1	B1
				Total 3 marks

45. 4MA1_2F_rms_20201106 Q: 5

Q	Working	Answer	Mark	Notes
a		0.003, 0.035, 0.5, 0.539, 0.9	1	B1
b		60	1	B1 allow 60%
c		$8\frac{4}{7}$	1	B1 oe
d	$0.95-0.68$ **or** $\frac{95}{100}-\frac{68}{100}$ **or** $\frac{19}{20}-0.68$ oe		2	M1 or $\frac{27}{100}$ or 27%
		0.27		A1
				Total 5 marks

46. 4MA1_2FR_rms_20200305 Q: 4

Question	Working	Answer	Mark	Notes
(a)		$\frac{11}{15}$	1	B1oe
(b)		$4\frac{3}{5}$	1	B1oe eg $4\frac{6}{10}$
(c)		$\frac{23}{100}$	1	B1oe eg $\frac{46}{200}$
(d)		0.4	1	B1 Accept 0.40
(e)		3.555, 3.61, 3.7, 3.82, 3.9	1	B1
				Total 5 marks

47. 4MA0_2F_rms_20180116 Q: 1

Question	Working	Answer	Mark	Notes
(a)	$\frac{18}{24}$, $\frac{6}{8}$	$\frac{3}{4}$	2	M1 any equivalent fraction A1
(b)		$\frac{7}{10}$	1	B1
(c)		$\frac{47}{1000}$	1	B1
(d)		3.25	1	B1

48. 4MA0_2FR_rms_20180608 Q: 4

Question	Working	Answer	Mark	Notes
(a)		6079	1	B1
(b)		400	1	B1 Hundred(s), 4 hundred(s), 100
(c)		72.2	1	B1
(d)	18, 36, 54, 72, 90, 108, 126, 144, 162, 180, …	e.g. 18, 36	1	B1 Any two multiples of 18
(e)		70	1	B1
(f)		$25+3\times(7-2)=40$	1	B1 Correct brackets
(g)		8607	1	B1
				Total 7 marks

49. 4MA1_2F_rms_20180608 Q: 1

Question	Working	Answer	Mark	Notes
(a)		$\frac{63}{100}$	1	B1
(b)		46800	1	B1
(c)		73.7	1	B1
(d)		9	1	B1
				Total 4 marks