Name	Class

MATHS TEACHER HUB

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Factors and multiples
(9 – 1) Topic booklet

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.

1   Write down two factors of 12

.... , ...

(Total for Question 1 is 1 mark)

2   Write down two factors of 35

....

(Total for Question 2 is 1 mark)

2   Here is a list of numbers.

            5   11   18   22   29

Fromthe list, write down a multiple of 3

....

(Total for Question 2 is 1 mark)

2   Write down a multiple of 8 that is between 41 and 60

....

(Total for Question 2 is 1 mark)

2 Write down a multiple of 6 that is between 40 and 50

....

(Total for Question 2 is 1 mark)

2 Here is a list of six numbers.

$$1 \qquad 3 \qquad 6 \qquad 9 \qquad 12 \qquad 24$$

Which number in the list is **not** a factor of 24?

....

(Total for Question 2 is 1 mark)

3 Write down two factors of 12

....

(Total for Question 3 is 1 mark)

3 Write down two factors of 15

....

(Total for Question 3 is 1 mark)

3 Here is a list of numbers.

$$3 \qquad 5 \qquad 7 \qquad 12 \qquad 15 \qquad 18 \qquad 20$$

From the list, write down a factor of 10

....

(Total for Question 3 is 1 mark)

3 Write down all the factors of 18

....

(Total for Question 3 is 2 marks)

3 Write down an even number that is a multiple of 7

....

(Total for Question 3 is 1 mark)

4 Write down a factor of 60 that is between 8 and 14

....

(Total for Question 4 is 1 mark)

4 Write down a 3 digit number that is a multiple of 5

....

(Total for Question 4 is 1 mark)

4 Here is a list of numbers.

7   8   15   16   18   22

Write down the number from the list that is a multiple of 6

....

(Total for Question 4 is 1 mark)

4 Here is a list of numbers.

1   2   5   6   12

From the list, write down

(i) a multiple of 4

....

(ii) a prime number

....

(Total for Question 4 is 2 marks)

4 Write down all the factors of 20

....

(Total for Question 4 is 2 marks)

5 Here is a list of numbers.

$$5 \qquad 11 \qquad 18 \qquad 22 \qquad 29$$

From the list, write down a multiple of 3

....

(Total for Question 5 is 1 mark)

5 Write down the first even multiple of 7

....

(Total for Question 5 is 1 mark)

6 Here is a list of whole numbers from 21 to 30

       21   22   23   24   25   26   27   28   29   30

(a) From the list, write down a square number.

....

(1)

(b) From the list, write down a multiple of 8

....

(1)

                                          (Total for Question 6 is 2 marks)

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6 Margaret is thinking of a number.
She says,

            "My number is odd. It is a factor of 36 and a multiple of 3"

There are two possible numbers Margaret can be thinking of.

Write down these two numbers.

....

                                          (Total for Question 6 is 3 marks)

6 Write down all the factors of 30

....

(Total for Question 6 is 2 marks)

6 Jan writes down

   one multiple of 9
  and two different factors of 40

Jan adds together her three numbers.
Her answer is greater than 20 but less than 30

Find three numbers that Jan could have written down.

....

(Total for Question 6 is 3 marks)

7 Write down three different factors of 18 that add together to give a prime number.

....

(Total for Question 7 is 2 marks)

8 Here is a list of numbers.

21   22   23   24   25   26   27   28   29

(a) From the numbers in the list, write down a square number.

....

(1)

(b) From the numbers in the list, write down a number that is a multiple of **both** 4 and 6

....

(1)

(c) Write down all the prime numbers in the list.

....

(1)

    (Total for Question 8 is 3 marks)

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11 Write down three different multiples of 4 that add up to 40

....

    (Total for Question 11 is 2 marks)

15 Bert has 100 cards.
There is a whole number from 1 to 100 on each card.
No cards have the same number.

Bert puts a star on every card that has a multiple of 3 on it.
He puts a circle on every card that has a multiple of 5 on it.

Work out how many cards have both a star and a circle on them.

....

(Total for Question 15 is 3 marks)