Name	Class

MATHS TEACHER HUB

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HCF and LCM

(9 – 1) Topic booklet

HIGHER

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 (a) Write 84 as a product of its prime factors.

.....

(2)

(b) Find the lowest common multiple (LCM) of 60 and 84

.....

(2)

(Total for Question 1 is 4 marks)

1 Find the Lowest Common Multiple (LCM) of 108 and 120

.....

November 2019 – Paper 1H **(Total for Question 1 is 3 marks)**

2 (a) Find the Highest Common Factor (HCF) of 60 and 84

.....

(2)

(b) Find the Lowest Common Multiple (LCM) of 24 and 40

.....

(2)

(Total for Question 2 is 4 marks)

2 (a) Find the lowest common multiple (LCM) of 40 and 56

.....

(2)

$A = 2^3 \times 3 \times 5$ $B = 2^2 \times 3 \times 5^2$

(b) Write down the highest common factor (HCF) of A and B.

.....

(1)

June 2018 – Paper 2H **(Total for Question 2 is 3 marks)**

3 Find the highest common factor (HCF) of 72 and 90

.....

June 2019 – Paper 1H **(Total for Question 3 is 2 marks)**

6 Liz buys packets of coloured buttons.

There are 8 red buttons in each packet of red buttons.
There are 6 silver buttons in each packet of silver buttons.
There are 5 gold buttons in each packet of gold buttons.

Liz buys equal numbers of red buttons, silver buttons and gold buttons.

How many packets of each colour of buttons did Liz buy?

.....packets of red buttons

.....packets of silver buttons

.....packets of gold buttons

(Total for Question 6 is 3 marks)

8 Two numbers m and n are such that

m is a multiple of 5

n is an even number

the highest common factor (HCF) of m and n is 7

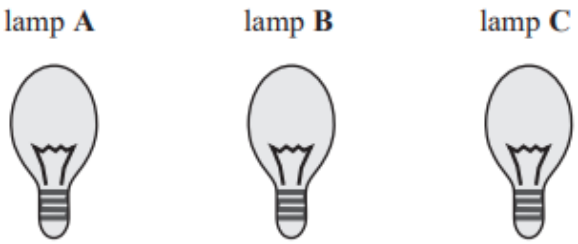
Write down a possible value for m and a possible value for n.

$m =$ .....

$n =$ .....

(Total for Question 8 is 2 marks)

10 Here are three lamps.



Lamp **A** flashes every 20 seconds.
Lamp **B** flashes every 45 seconds.
Lamp **C** flashes every 120 seconds.

The three lamps start flashing at the same time.

How many times in one hour will the three lamps flash at the same time?

.....

(Total for Question 10 is 3 marks)