

1MA1 Higher themed papers: Factors multiples and primes

Write your name here			
Surname	Other names		
Centre Number		Candidate Number	
Pearson Edexcel Level 1/Level 2 GCSE (9–1)			
Mathematics Factors multiples and primes			
		Paper Reference 1MA1	
You must have: Ruler graduated in centimetres and millimetres, protractor, pair of compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.			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.*
- You must **show all your working**.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- If your calculator does not have a π button, take the value of π to be 3.142 unless the question instructs otherwise.

Information

- The total mark for this paper is **23**. There are **8** questions.
- Questions have been arranged in an ascending order of mean difficulty, as found by all students in the June 2017–November 2019 examinations.
- 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.

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- 1** Express 56 as the product of its prime factors.

.....

(Total for Question 1 is 2 marks)



- 2** Find the highest common factor (HCF) of 72 and 90

.....

(Total for Question 2 is 2 marks)

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- 3** Write 36 as a product of its prime factors.

.....
(Total for Question 3 is 2 marks)

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4

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

.....
(Total for Question 4 is 3 marks)

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

.....
(2)

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

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

.....
(1)

(Total for Question 5 is 3 marks)

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- 6** Write 136 as a product of its prime factors.

.....

(Total for Question 6 is 3 marks)

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- 7 (a) Write 168 as a product of its prime factors.
You must show your working.

.....
(3)

- (b) Find the highest common factor (HCF) of 168 and 180.

.....
(2)

(Total for Question 7 is 5 marks)

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8 Here are three lamps.

lamp A



lamp B



lamp C



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 8 is 3 marks)

TOTAL MARKS FOR PAPER: 23