Name: _____

GCSE (1 - 9) Prime Factors, HCF and LCM	Solutions:

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***Summer 2023*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Summer 2017, Paper 1F, Q22
2	Edexcel, GCSE, Autumn 2017, Paper 1F, Q23
3	Edexcel, GCSE, Summer 2018, Paper 2F, Q21
4	Edexcel, GCSE, Autumn 2018, Paper 3F, Q15
5	Edexcel, GCSE, Summer 2019, Paper 1F, Q24
6	Edexcel, GCSE, Autumn 2019, Paper 1F, Q20
7	Edexcel, GCSE, Autumn 2020, Paper 2F, Q22
8	Edexcel, GCSE, Summer 2022, Paper 1F, Q24
9	Edexcel, GCSE, Summer 2023, Paper 2F, Q21
10	Edexcel, GCSE, Summer 2023, Paper 3F, Q24
11	Edexcel, GCSE, November 2022, Paper 1F, Q19

1

Express 56 as the product of its prime factors.

.....

(Total for Question 22 is 2 marks)

[Edexcel, GCSE, Summer 2017, Paper 1F, Q22]

2

Write 36 as a product of its prime factors.

.....

(Total for Question 23 is 2 marks)

[Edexcel, GCSE, Autumn 2017, Paper 1F, Q23]

3

(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)

(Total for Question 21 is 3 marks)

[Edexcel, GCSE, Summer 2018, Paper 2F, Q21]

4

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)

[Edexcel, GCSE, Autumn 2018, Paper 3F, Q15]

5

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

.....

(Total for Question 24 is 2 marks)

[Edexcel, GCSE, Summer 2019, Paper 1F, Q24]

6

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

.....

(Total for Question 20 is 3 marks)

[Edexcel, GCSE, Autumn 2019, Paper 1F, Q20]

7

(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 21 is 4 marks)

[Edexcel, GCSE, Autumn 2020, Paper 2F, Q22]

8

Write 124 as a product of its prime factors.

.....

(Total for Question 2 is 2 marks)

[Edexcel, GCSE, Summer 2022, Paper 1F, Q24]

9

Write 60 as a product of its prime factors.

.....

(Total for Question 21 is 2 marks)

[Edexcel, GCSE, Summer 2023, Paper 2F, Q21]

10

A and B are numbers such that

$$A = 2^2 \times 3^4 \times 7$$
$$B = 3^2 \times 7^2$$

(a) Find the highest common factor (HCF) of A and B.

.....

(1)

(b) Find the lowest common multiple (LCM) of A and B.

.....

(2)

(Total for Question 24 is 3 marks)

[Edexcel, GCSE, Summer 2023, Paper 3F, Q24]

11

Write 500 as a product of powers of its prime factors.

.....

(Total for Question 19 is 3 marks)

[Edexcel, GCSE, November 2022, Paper 1F, Q19]