

GCSE MATHEMATICS

Higher tier

Number

Topic test – Product of primes – HCF & LCM

v1.0

Name _____

Materials

For this paper you must have:

- Mathematical instruments
- You must not use a calculator.



Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 26.

Advice

- In all calculations, show clearly how you work out your answer.

For Teacher's Use	
Pages	Mark
2 - 3	
4 - 5	
6 - 7	
TOTAL	

1 (a) Write down all the factors of 44

[1 mark]

Answer _____

1 (b) How many factors does 12 have?

[1 mark]

Answer _____

1 (c) What is the highest common factor (HCF) of 24 and 30?

[2 marks]

Answer _____

2 (a) Write down 3 different multiples of 17?

[1 mark]

Answer _____

2 (b) Work out the lowest common multiple (LCM) of 6 and 15

[2 marks]

Answer _____

3 (a) Write down **all** the prime numbers between less than 20

[2 marks]

Answer _____

3 (b) Write 20 as a product of prime numbers.

[1 mark]

Answer _____

- 4** Work out the Lowest Common Multiple (LCM) of 4, 12 and 20

[2 marks]

Answer _____

- 5** Write 72 as a product of prime factors.
Give your answer in index form.

[3 marks]

Answer _____

6 Work out the Lowest Common Multiple (LCM) of 24 and 40

[2 marks]

Answer _____

7 Work out the Highest Common Factor (HCF) of 48 and 80

[2 marks]

Answer _____

Turn over ►

8 Write 540 as a product of prime factors.

Give your answer in index form.

[3 marks]

Answer _____

9 A number x can be written as

$$x = 2^8 \times 3^2 \times 5^4$$

Work out $20x$

Give your answer as a product of prime factors in index form.

[2 marks]

Answer _____

10 As a product of prime factors in index form $P = 2^2 \times 3^3 \times x^4$

Work out P^2 as a product of prime factors in index form.

Give your answer in terms of x

[1 mark]

Answer _____

11 As a product of prime factors in index form $Q = 2^2 \times 3^3 \times 5$

Write down all the factors of Q

[1 mark]

Answer _____

END OF QUESTIONS