4.3 Prime Factors, HCF and LCM: 10-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Is 1 a prime number? Write down yes or no.

- ☐ Yes
- ☐ No

(Total for Question 1 is 1 mark)

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2 Complete a prime factor tree for 45 and write the prime factorisation.

(Total for Question 2 is 2 marks)

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3 Work out the lowest common multiple (LCM) of 4 and 6. Show your method.

(Total for Question 3 is 2 marks)

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4 Find the highest common factor (HCF) of 28 and 35. Show your working.

(Total for Question 4 is 2 marks)

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5 Write 176 as a product of its prime factors.

(Total for Question 5 is 2 marks)

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Mark scheme · 4.3 Prime Factors, HCF and LCM: 10-minute Pack

Question 1

No, 1 is not a prime number cao **B1**

Answer: No

Question 2

correct factor tree or method shown, e.g. 45 = 9 * 5, 9 = 3 * 3 **M1**

3^2 * 5 cao **A1**

Answer: 3^2 * 5

Question 3

method to find LCM using multiples or prime factors, e.g. multiples 4,8,12 and 6,12 or prime factors 2^2 and 2*3 **M1**

12 cao **A1**

Answer: 12

Question 4

correct method shown, e.g. prime factors 28 = 2^2 * 7 and 35 = 5 * 7 or listing factors **M1**

7 cao **A1**

Answer: 7

Question 5

a correct factor tree or repeated division by primes **M1**

2^4 x 11 **A1**

Answer: 2^4 x 11

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