

Name:

Teacher  
Assessment



**Section A**      **Factors, Multiples and Primes**      **Grade E → C**

1. (a) Write down all the factors of 8.

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Answer ..... (2)

(b) Write down any 3 multiples of 8

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Answer ..... (2)

(c) The first four square numbers are 1, 4, 9, 16.  
Write down the ninth square number.

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Answer ..... (1)

**(Total 5 marks)**

2. Here is a list of numbers

6    8    11    15    25    28    30    33

From this list, write down

(a) a multiple of 7,      Answer ..... (1)

(b) the two factors of 24,      Answer ..... (2)

(c) a square number,      Answer ..... (1)

(d) a prime number.      Answer ..... (1)

**(Total 5 marks)**

3. (a) This is a page from Zoe's exercise book.

$2^3 - 1^3 = 7$  (prime)  
 $3^3 - 2^3 = 19$  (prime)  
 $4^3 - 3^3 = 37$  (prime)

The difference  
between  
consecutive cube  
numbers  
is always a prime  
number.

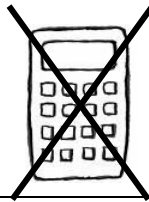
Give a counter example to show that Zoe is wrong.  
Justify your answer.

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**(Total 2 marks)**

Success:

Target:



**Section B**                      **PFD, HCFs and LCMs**                      **Grade C / B**

1. Express 120 as the product of its prime factors.  
Give your answer in index form.

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Answer .....  
**(Total 3 marks)**

2. Express 360 as a product of its prime factors.  
Give your answer in index form.

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Answer .....  
**(Total 3 marks)**

3. (a) Express 36 as a product of its prime factors.

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Answer .....  
**(3)**

(b) Find the Highest Common Factor (HCF) of 36 and 60.

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Answer .....

(2)

(Total 5 marks)

4. (a) Express 108 as a product of its prime factors.  
Give your answer in index form.

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Answer .....

(3)

(b) Find the Highest Common Factor (HCF) of 108 and 72.

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Answer .....

(2)

(Total 5 marks)

5. (a) Express 24 as a product of its prime factors.

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Answer .....

(2)

(b) Find the Least Common Multiple (LCM) of 24 and 60.

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Answer .....

(2)

(Total 4 marks)

6. (a) Write 28 as the product of its prime factors.  
Give your answer in index form.

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Answer.....

(3)

(b) Find the least common multiple (LCM) of 28 and 42.

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Answer.....

(2)

(Total 5 marks)

7. (a) Express 100 as the product of prime factors.  
Write your answer in index form.

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Answer .....

(3)

- (b) You are given that  $56 = 2^3 \times 7$

Find the least common multiple (LCM) of 56 and 100.

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Answer .....

(2)

(Total 5 marks)

8. 36 expressed as a product of its prime factors is  $2^2 \times 3^2$

(a) Express 45 as a product of its prime factors.  
Write your answer in index form.

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Answer ..... (3)

(b) What is the Highest Common Factor (HCF) of 36 and 45?

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Answer ..... (1)

(c) What is the Least Common Multiple (LCM) of 36 and 45?

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Answer ..... (1)  
(Total 5 marks)

9. You are given that  $n = 2^2 \times 5$

Write  $40n$  as the product of its prime factors.

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Answer .....

(Total 3 marks)

Success:

Target: