



Name: _____ **Date:** _____ **Score:** _____ / 49

- 1** Write down the lowest common multiple (LCM) of
3 6 9 18 54

(1 mark)

Answer _____

- 2** Find the lowest common multiple (LCM) of 8 and 12.

(2 marks)

Answer _____

- 3** A bus to Hull leaves a station every 12 minutes. A bus to York leaves the same station every 18 minutes. Both buses leave at 08:00.

At what time do they next leave together?

(2 marks)

Answer _____

- 4**
- a. Write 84 as a product of its prime factors.
 - b. Write 126 as a product of its prime factors.
 - c. Find the highest common factor (HCF) of 84 and 126.
 - d. Find the lowest common multiple (LCM) of 84 and 126.

(5 marks)

Answer _____

5 $A = 2^3 \times 3^2 \times 5$ and $B = 2^2 \times 3 \times 7$

- Find the highest common factor of A and B.
- Find the lowest common multiple of A and B.

Give both answers as ordinary numbers.

(3 marks)

Answer _____

6 Find the highest common factor (HCF) of 54 and 90

(2 marks)

Answer _____

7 The prime factors of 60 and 90 have been sorted into a Venn diagram, shown here as a table.

Only in 60	In both	Only in 90
2	2 3 5	3

- Use the diagram to find the HCF of 60 and 90.
- Use the diagram to find the LCM of 60 and 90.

(3 marks)

Answer _____

8 Find the highest common factor (HCF) of 48 and 84

(2 marks)

Answer _____

9 The highest common factor of two numbers is 12 and their lowest common multiple is 72.
One of the numbers is 36.

Work out the other number.

(3 marks)

Answer _____

10 Write down two numbers, both greater than 20, whose highest common factor (HCF) is 7 (2 marks)

Answer _____

11 Find the lowest common multiple (LCM) of 15 and 18 (3 marks)

Answer _____

12 $A = 2^3 \times 3 \times 5^2$

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

- Find the highest common factor (HCF) of A and B .
- Find the lowest common multiple (LCM) of A and B .
Give your answers as products of powers of primes.

(3 marks)

Answer _____

13 Nadia is making table decorations.

Each decoration needs one candle and one holder.

Candles are sold in packs of 9

Holders are sold in packs of 12

Nadia buys exactly the same number of candles as holders, with none left over.

Work out the smallest number of packs of candles and the smallest number of packs of holders she can buy.

(3 marks)

Answer _____

- 14** Two warning buoys are anchored in a harbour.
One buoy flashes every 24 seconds.
The other buoy flashes every 40 seconds.
At 8 pm the two buoys flash at the same time.
Work out how many seconds later the two buoys next flash at the same time.

(3 marks)

Answer _____

- 15** a. Write 126 as a product of its prime factors.
b. Find the lowest common multiple (LCM) of 126 and 60

(4 marks)

Answer _____

- 16** a. Write 448 as a product of powers of its prime factors.
b. Find the highest common factor (HCF) of 448 and 168

(4 marks)

Answer _____

- 17** a. Find the highest common factor (HCF) of 72 and 120
b. Find the lowest common multiple (LCM) of 72 and 120

(4 marks)

Answer _____

End of questions | Total 49 marks