

HCF and LCM Past Paper Questions



Q1.

Express 56 as the product of its prime factors.

.....

(Total for question = 2 marks)

Q2.

Write down two factors of 12

..... ,

(Total for question = 1 mark)

Q3.

Write down a factor of 60 that is between 8 and 14

.....

(Total for question = 1 mark)



Q4.

Here is a list of numbers.

1 2 5 6 12

From the list, write down

(i) a multiple of 4

.....

(ii) a prime number

.....

(Total for question is 2 marks)

Q5.

Here is a list of eight numbers

4 5 4 25 29 30 33 39 40

From the list, write down

(i) a factor of 20

.....

(ii) a multiple of 10

.....

(iii) the prime number that is greater than 15

.....

(Total for Question is 3 marks)

Q6.

Write down the first even multiple of 7

.....

(Total for question = 1 mark)



Q7.

Here is a list of numbers.

5 15 30 50 60 90 100 125

From the numbers in the list, write down

(i) two different numbers that add up to an even number

.....

(ii) a multiple of 20

.....

(iii) a factor of 45

.....

(iv) a cube number

.....

(Total for Question is 4 marks)

Q8.

Find the Highest Common Factor (HCF) of 24 and 60

.....

(Total for question = 2 marks)

Q9.

Express 180 as a product of its prime factors.

.....

(Total for Question is 3 marks)



Q10.

Write 525 as a product of its prime factors.

.....

(Total for Question is 3 marks)

Q11.

Find the highest common factor (HCF) of 32, 48 and 72

.....

(Total for question = 2 marks)

Q12.

(a) Find the lowest common multiple (LCM) of 40 and 56

.....

(2)

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

(b) Write down the highest common factor (HCF) of A and B .

.....

(1)

(Total for question = 3 marks)



Q13.

Tom and Amy set the alarms on their phones to sound at 6.45 am.

Both alarms sound together at 6.45 am.

Tom's alarm then sounds every 9 minutes.

Amy's alarm then sounds every 12 minutes.

At what time will both alarms next sound together?

.....

(Total for question = 3 marks)

Q14.

Find the Lowest Common Multiple (LCM) of 8 and 12

.....

(Total for Question is 2 marks)



Q15.

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

.....

(Total for question = 3 marks)

Q16.

- (a) Write 168 as a product of its prime factors.
You must show your working.

.....

(3)

- (b) Find the highest common factor (HCF) of 168 and 180

.....

(2)

(Total for question = 5 marks)



Q17.

Rita is going to make some cheeseburgers for a party.

She buys some packets of cheese slices and some boxes of burgers.

There are 20 cheese slices in each packet.

There are 12 burgers in each box.

Rita buys exactly the same number of cheese slices and burgers.

(i) How many packets of cheese slices and how many boxes of burgers does she buy?

..... packets of cheese slices

..... boxes of burgers

Rita wants to put one cheese slice and one burger into each bread roll.

She wants to use all the cheese slices and all the burgers.

(ii) How many bread rolls does Rita need?

..... bread rolls

(Total for Question is 4 marks)

Q18.

Buses to Acton leave a bus station every 24 minutes.

Buses to Barton leave the same bus station every 20 minutes.

A bus to Acton and a bus to Barton both leave the bus station at 9 00 am.

When will a bus to Acton and a bus to Barton next leave the bus station at the same time?

.....

(Total for Question is 3 marks)



Q19.

Matt and Dan cycle around a cycle track.

Each lap Matt cycles takes him 50 seconds.

Each lap Dan cycles takes him 80 seconds.

Dan and Matt start cycling at the same time at the start line.

Work out how many laps they will each have cycled when they are next at the start line together.

.....
.....

(Total for Question is 3 marks)

Q20.

Buses to Ashby leave a bus station every 24 minutes.

Buses to Barford leave the same bus station every 20 minutes.

A bus to Ashby and a bus to Barford both leave the bus station at 7 30 am.

When will a bus to Ashby and a bus to Barford next leave the bus station at the same time?

.....

(Total for question = 3 marks)