Name:

Exam Style Questions

Lowest Common Multiples
Highest Common Factors

Corbettmaths

Equipment needed: Pen and Calculator

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

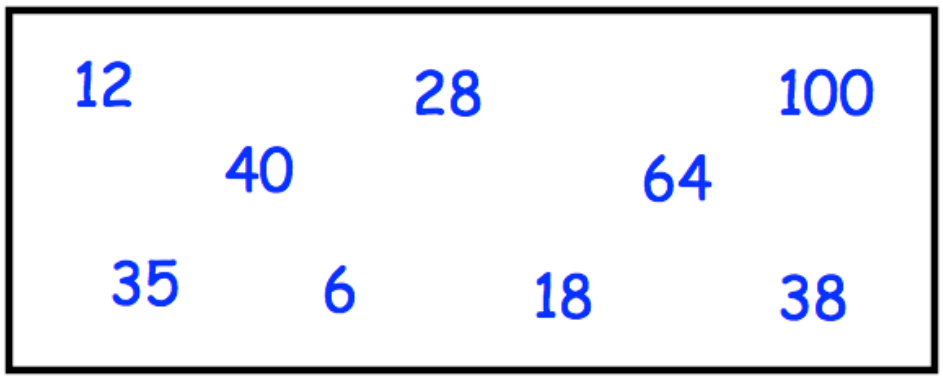
Video Tutorial

www.corbettmaths.com/contents

Videos 218, 219

Answers and Video Solutions

1.



From the box above, choose two numbers that:

(a) have a common factor of 10

..... and .....
(1)

(b) have a common multiple of 24

..... and .....
(1)

(c) have a common factor of 7

..... and .....
(1)

(d) have a common multiple of 200

..... and .....
(1)

2. (a) List the factors of 28

.....

(1)

(b) Write down the highest common factor (HCF) of 21 and 28

.....

(1)

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3. Write down the highest common factor (HCF) of 12 and 16.

.....

(2)

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4. Write down the lowest common multiple (LCM) of 9 and 12.

.....

(2)

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5. Write down two numbers that have a highest common factor (HCF) of 10

.....and .....

(2)

6. A red light flashes every 6 seconds.
A yellow light flashes every 4 seconds.
They both flash at the same time.

After how many seconds will they next both flash at the same time?

.....seconds
(2)

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7. Tilly the dog barks every 9 seconds.
Billy the dog barks every 12 seconds.
They both bark at the same time.

After how many seconds will they next bark at the same time?

.....seconds
(2)

8. Black pens are sold in packets of 10
Red pens are sold in packets of 4
Green pens are sold in packets of 3

Minah wants to buy the same number of black pens, red pens and green pens.

Work out the smallest number of each packet se should buy.

Number of packets of black pens .....

Number of packets of red pens .....

Number of packets of green pens .....

(2)

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9. Mr Jones repaints his fence every 6 years.
Mr Jones repaints his front door every 9 years.

He repainted both the fence and front door in 2025.

When is the next year that he repaint both the fence and front door?

.....

(2)

10. Write down three numbers that have a lowest common multiple (LCM) of 24

…… …… ……

(2)

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11. Rosie and Sophie jog around a rectangular hockey pitch for 45 minutes.
They place an orange cone at the starting point and begin running at the same time.

Each lap takes Rosie 2 minutes
Each lap takes Sophie 100 seconds.

After they start running, how many times do Rosie and Sophie pass the orange cone at the same time?

.....

(4)

12. A blue light flashes every 8 minutes while a pink light flashes every 54 minutes.
Both lights flash together at 2pm.

When is the next time that both lights will flash together again?

.....

(2)

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13. Mary is organising a charity hot dog sale.
There are 18 bread rolls in each packet.
There are 15 hot dogs in each packet.
Mary buys exactly the same number of bread rolls as hot dogs.

What is the smallest number of each packet that Mary can buy?

..... packets of bread rolls

..... packets of hot dogs

(3)

14. Helen thinks of two numbers.

The Highest Common Factor (HCF) of her two numbers is 5
The Lowest Common Multiple (LCM) of her two numbers is a multiple of 12

Write down two possible numbers that Helen could be thinking of.

..... and .....

(2)

15. Trains leave Bristol

to Cardiff every 15 minutes
to London every 21 minutes

A train to Cardiff and a train to London both leave Bristol at 11am.

At what time will a train to Cardiff and a train to London next leave Bristol at the same time?

.....

(3)

16. Jessica writes down two numbers, **a** and **b**.

a is an even number.
b is a multiple of 3

The highest common factor (HCF) of **a** and **b** is 25

Write down possible values for **a** and **b**.

a = ...

b = ...

(3)

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17. Trains to Portadown leave a train station every 28 minutes.
Trains to Portrush leave a train station every 16 minutes

A train to Portadown and a train to Portrush both leave the train station at 8am.

When will a train to Portadown and a train to Portrush both leave the train station at the same time?

.....

(3)

18. The Highest Common Factor (HCF) of two numbers is 6.
The Lowest Common Multiple (LCM) of the same numbers is 60.

What are the two numbers?

..... and .....

(2)

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19. A red light flashes every 3 seconds.
A yellow light flashes every 8 seconds.
A green light flashes every 11 seconds
They all flash at the same time.

After how many seconds will they next all flash at the same time?

.....seconds

(2)

20. Last year James started collecting mini figures.
He displays them in cases.

A bag of 6 mini figures costs £15
Each display case holds 16 figures and costs £9

Last year James bought enough bags of mini figures and display cases to

have between 50 and 100 mini figures

fill every display case he bought.

Work out how much James spent on his collection.

£.....

(4)