



HCF and LCM



REVISE THIS TOPIC

CHECK YOUR ANSWERS



1 Work out the highest common factor (HCF) of 12 and 20 [2 marks]

Answer _____



2 Work out the lowest common multiple (LCM) of 6 and 8 [2 marks]

Answer _____



3 Work out the highest common factor (HCF) of 15 and 18 [2 marks]

Answer _____





4 Work out the lowest common multiple (LCM) of 9 and 12 [2 marks]

Answer _____



5 Work out the highest common factor (HCF) of 28 and 35 [2 marks]

Answer _____



6 Work out the lowest common multiple (LCM) of 15 and 20 [2 marks]

Answer _____



7 Work out the highest common factor (HCF) of 16 and 40 [2 marks]

Answer _____





8 Work out the highest common factor (HCF) of 12, 18, and 21 [2 marks]

Answer _____



9 Work out the lowest common multiple (LCM) of 10, 30 and 40 [2 marks]

Answer _____



10 Work out the highest common factor (HCF) of 15, 30 and 45 [2 marks]

Answer _____



11 Work out the lowest common multiple (LCM) of 5, 6 and 9 [2 marks]

Answer _____



16

Turn over ►





12 There are 120 students in Year 11 and 72 students in Year 10.

All of the students are split into groups for revision.
Year 11 students must not be in the same group as Year 10 students.
All of the group sizes must be the same.

Work out the maximum possible group size and how many groups there will be. **[3 marks]**

Maximum Group Size _____

Number of Groups _____

13 The 90A bus and the 95B bus both stop at the bus station at 12:00pm.

90A returns to the station every 18 minutes
95B returns to the station every 8 minutes.

Work out the next time when both buses return to the station at the same time. **[3 marks]**

Answer _____





14

Sophie checks her bike for repairs every 8 days
Susan check her bike for repairs every 6 days.

They both check their bikes on the 1st of May.
Work out the next date on which both Sophie and Susan check their bikes for repairs. [3 marks]

Answer _____



15

Jason, Billy and Kim are running laps of an athletics track.

Jason runs each lap in 4 minutes.
Billy runs each lap in 6 minutes.
Kim runs each lap in 4 and a half minutes.

All three runners start running laps from the same point at 1:40 pm.

Work out the next time when all three runners will complete a lap together. [3 marks]

Answer _____



Turn over ►





16 Work out the highest common factor (HCF) of 63 and 135 [2 marks]

Answer _____

17 Work out the lowest common multiple (LCM) of 63 and 135 [2 marks]

Answer _____

18 Work out the highest common factor (HCF) of 84 and 140 [2 marks]

Answer _____





19 Work out the lowest common multiple (LCM) of 84 and 140 [2 marks]

Answer _____

20 Work out the highest common factor (HCF) of 150 and 550 [2 marks]

Answer _____

21 Work out the lowest common multiple (LCM) of 150 and 550 [2 marks]

Answer _____

12

Turn over ►





22 Work out the highest common factor (HCF) of 66 and 154 [2 marks]

Answer _____

23 Work out the lowest common multiple (LCM) of 66 and 154 [2 marks]

Answer _____

24 Work out the highest common factor (HCF) of 78 and 390 [2 marks]

Answer _____





25 Work out the lowest common multiple (LCM) of 78 and 390 [2 marks]

Answer _____

26 Work out the highest common factor (HCF) of 102 and 136 [2 marks]

Answer _____

27 Work out the lowest common multiple (LCM) of 102 and 136 [2 marks]

Answer _____

12

Turn over ►





28 $A = 2^3 \times 3 \times 5$
 $B = 2 \times 3^2$

28 (a) Work out the highest common factor (HCF) of A and B . [2 marks]
Give your answer as an integer.

Answer _____

28 (b) Work out the highest common factor (HCF) of A and B . [2 marks]
Give your answer as an integer.

Answer _____





29 $C = 2 \times 3 \times 5^2 \times 7$
 $D = 2^2 \times 5 \times 13$

29 (a) Work out the highest common factor (HCF) of C and D . [2 marks]
Give your answer as an integer.

Answer _____

29 (b) Work out the highest common factor (HCF) of C and D . [2 marks]
Give your answer as an integer.

Answer _____

Turn over ►





30

$$E = 2^{10} \times 3^4$$

$$F = 2^6 \times 3 \times 5^5$$

30 (a)

Work out the highest common factor (HCF) of E and F .
Give your answer in index form.

[2 marks]



Answer _____

30 (b)

Work out the highest common factor (LCM) of E and F .
Give your answer in index form.

[2 marks]



Answer _____





31 101 and 499 are prime numbers.

Work out the highest common factor (HCF) of 808 and 49900

[2 marks]



Answer _____

32 Sarah thinks of two integers that are both less than 100.

The highest common factor of Sarah's integers is 18

The lowest common multiple of Sarah's integers is 360

Work out the two integers that Sarah is thinking of.

[3 marks]



Answer _____ and _____

$\frac{\quad}{9}$

