GCSE · Edexcel · Maths

2 hours 61 questions

Exam Questions

Types of Number, Prime Factors, HCF & LCM

Types of Number / Multiples, Factors & Primes / Squares, Cubes & Roots / Reciprocals / Prime Factor Decomposition / HCF & LCM

Easy (24 questions)	/38
Medium (23 questions)	/64
Hard (14 questions)	/42
Total Marks	**/144**

Scan here to return to the course
or visit savemyexams.com

Easy Questions

1 (a) Here is a whole list of numbers from 31 to 40

31 32 33 34 35 36 37 38 39 40

From the list write down a square number.

(1 mark)

(b) Write down a multiple of 7.

(1 mark)

2 Write down a prime number that is greater than 20 but less than 30.

(1 mark)

3 Write down all the prime numbers between 50 and 60.

(1 mark)

4 Write down the reciprocal of 64.

(1 mark)

5 Write down the reciprocal of 2.

(1 mark)

6 Write down the reciprocal of 10.

(1 mark)

7 (a) Write down a square number greater than 10.

(1 mark)

(b) Write down an irrational number.

(1 mark)

8 Write down all the factors of 15.

(2 marks)

9 Write down the reciprocal of 40.

(1 mark)

10 Write down the reciprocal of 7.

(1 mark)

11 Write down all the factors of 24.

(2 marks)

12 Write down the smallest prime number.

(1 mark)

13 Write down the six factors of 12.

(2 marks)

14 (a) Write down all the factors of 16.

(2 marks)

(b) Write down a prime number between 30 and 40.

(1 mark)

15 Write down all the factors of 28.

(2 marks)

16 Write 220 as the product of its prime factors.

(2 marks)

17 Find the highest **odd** number that is a factor of 60 and a factor of 90.

(1 mark)

18 Find the lowest common multiple (LCM) of 8 and 14.

(2 marks)

19 Write 54 as a product of its prime factors.

(2 marks)

20 Write 18 as the product of its prime factors.

(2 marks)

21 Find the lowest common multiple (LCM) of 15 and 27.

(2 marks)

22 Write down all the factors of 60.

(2 marks)

23 Write down a multiple of 60 that is between 200 and 250.

(1 mark)

24 Write down a prime factor between 30 and 40.

(1 mark)

Medium Questions

1 (a) Here is a whole list of numbers from 2 to 15

2 3 4 5 6 7 8 9 10 11 12 13 14 15

From the list write down a cube number.

(1 mark)

(b) From the list write down all the factors of 24.

(2 marks)

2 Write down two prime numbers that have a sum of 40.

(1 mark)

3 Ellis says

"There are more prime numbers between 40 and 50 than there are between 30 and 40"

Is Ellis correct?

You must show how you get your answer.

(2 marks)

4

8	15	18	33	39	41	51	57	60	81

From this list, write down

i) a factor of 54,

[1]

ii) a multiple of 19,

[1]

iii) a prime number.

[1]

(3 marks)

5 Write down

i) all the factors of 21,

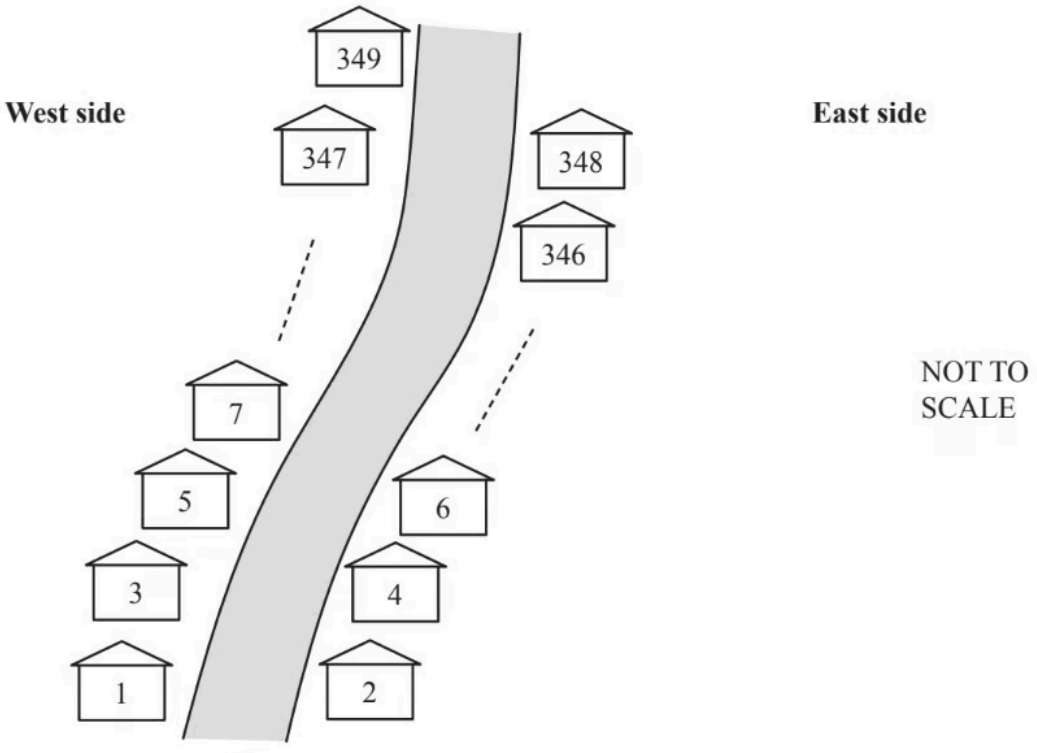
[2]

ii) a prime number between 40 and 50.

[1]

(3 marks)

6 (a)



A road has 349 houses on it numbered from 1 to 349.
The diagram shows some of these houses.
The houses on the West side of the road have odd numbers.
The houses on the East side have even numbers.

Write down the numbers in this list that are on the West side.

25	87	126	178	252	329

(1 mark)

(b) On the East side, how many houses are there between the house numbered 168 and the house numbered 184?

(1 mark)

(c) How many houses on the road have a house number that is a multiple of 39?

(2 marks)

7 Write down

i) all the factors of 18,

[2]

ii) a square number between 30 and 50,

[1]

iii) a prime number between 90 and 100.

[1]

(4 marks)

8 (a) Find the first even multiple of seven that is greater than 100.

(2 marks)

(b) Choose the irrational number.

A. 6^{-1}

B. $\sqrt{10}$

C. 8.97×10^{-3}

D. $\frac{7}{5}$

E. $\sqrt{64}$

(1 mark)

9 (a) Here is a list of numbers.

$$21 \qquad \frac{2}{3} \qquad \sqrt{13} \qquad 31 \qquad \sqrt{121} \qquad 51 \qquad 0.7$$

From this list, write down a prime number.

(1 mark)

(b) From this list, write down an irrational number.

(1 mark)

10 (a) Using the integers from 60 to 75 only, find

i) a multiple of 17,

[1]

ii) the prime numbers.

[2]

(3 marks)

(b) Write down the reciprocal of 7.

(1 mark)

11 (a)

32	33	34	35	36	37	38	39

From this list of numbers, write down a multiple of 8.

(1 mark)

(b)

32	33	34	35	36	37	38	39

From this list of numbers, write down a square number.

(1 mark)

(c)

32	33	34	35	36	37	38	39

From this list of numbers, write down a prime number.

(1 mark)

12 (a) Here is a list of numbers.

87	77	57	47	27

From this list, write down a cube number.

(1 mark)

(b) From this list, write down a prime number.

(1 mark)

13 (a)

27	28	29	30	31	32	33

From the list of numbers, write down a multiple of 7.

(1 mark)

(b) From the list of numbers, write down a cube number.

(1 mark)

(c) From the list of numbers, write down a prime number.

(1 mark)

14 Write 825 as the product of its prime factors.

(2 marks)

15 Find the lowest common multiple (LCM) of 48 and 60.

(2 marks)

16 Write 195 as a product of its prime factors.

(2 marks)

17 i) Write 60 as a product of its prime factors.

[2]

ii) Find the lowest common multiple (LCM) of 36 and 60.

[2]

(4 marks)

18 Write 432 as the product of its prime factors.

(2 marks)

19 Find the highest common factor (HCF) of 24 and 108.

(2 marks)

20 Find the highest common factor (HCF) of 90 and 48.

(2 marks)

21 Find the lowest common multiple (LCM) of 28 and 35.

(2 marks)

22 (a) Write 1260 as a product of its prime factors.

(3 marks)

(b) Find the Highest Common Factor (HCF) of 1260 and 540

(3 marks)

23 Sofia has 120 lockers in a school hallway, numbered from 1 to 120.

She sticks a blue sticker on every fourth locker, starting with locker number 4.

She sticks a red sticker on every sixth locker, starting with locker number 6.

How many lockers have both a blue sticker and a red sticker?

(3 marks)

Hard Questions

1 (a) Write down the value of $\sqrt{81}$.

(1 mark)

(b) Write down the value of $4^3 + 5^2$

(2 marks)

2 Write down a prime number that is also a factor of 56.

(1 mark)

3 Aziz chooses a prime number and a square number.

He adds together his two numbers.
The result is a cube number that is smaller than 30.

Find two numbers that Aziz could have written down.

(2 marks)

4 Using numbers from 55 to 85, write down

i) a multiple of 23,

[1]

ii) a factor of 120,

[1]

iii) a common multiple of 8 and 12,

[1]

iv) a number that is **both** square **and** odd,

[1]

v) a number that has exactly 2 factors.

[1]

(5 marks)

5 The diagram shows five number cards.

Put two cards side by side to show

i) a two-digit number that is a multiple of 7,

[1]

ii) a two-digit square number,

[1]

iii) a two-digit cube number,

[1]

iv) a two-digit prime number.

[1]

(4 marks)

6 Write down a common factor of 16 and 72 that is greater than 2.

(1 mark)

7 (a) Show that there is not a square number between 50 and 60.

(2 marks)

(b) Write down a prime number between 50 and 60.

(1 mark)

8 Find

i) the smallest multiple of 7 that is greater than 100,

[1]

ii) the largest cube number that is less than 100,

[1]

iii) the six factors of 45,

[2]

(4 marks)

9 At a bus stop

- a red bus arrives every 18 minutes
- and a blue bus arrives every 24 minutes.

At 1047 a red bus and a blue bus arrive.

Find the next time when a red bus and a blue bus arrive together.

(3 marks)

10 Find the highest common factor (HCF) of 126 and 180.

(2 marks)

11 i) Find the highest common factor (HCF) of 36 and 90.

[2]

ii) Find the lowest common multiple (LCM) of 36 and 90.

[2]

(2 marks)

12 Gerry and Alain run around a running track.

To run around the track once

- Gerry always takes 90 seconds
- Alain always takes 105 seconds.

They start together at the same point.

After how many minutes are they next together at that point?

..... min

(3 marks)

13 i) Find the highest common factor (HCF) of 28 and 98.

[2]

ii) Find the lowest common multiple (LCM) of 28 and 98.

[2]

(4 marks)

14 Talan completes one lap of a track every 80 seconds.

i) Work out how many laps he can complete in one hour.

[2]

ii) Naima completes one lap of the same track every 88 seconds. Talan and Naima start running from point A on the track at the same time. They each complete a number of laps of the track.

Work out the smallest number of laps they each complete before they are both at point A again at the same time.

Talan completes ..... laps and Naima completes ..... laps. [3]

(5 marks)