

Number

ANSWERS

No calculator | 30 minutes | Total marks: 31

Name

Class

1 Work out

(a) $-6 + 11$

Answer 5 (1) [1 mark]

(b) $4 - 9$

Answer -5 (1) [1 mark]

2 The table shows the lowest temperature in four towns one night.

Town	Leeds	Braemar	Bath	York
Temperature (°C)	-3	-7	2	-1

(a) Which town was the coldest?

Answer Braemar (1) [1 mark]

(b) How many degrees warmer was Bath than Braemar?

Answer 9 (1) °C [1 mark]

3

Work out

(a) -6×4

Answer -24 (1)

[1 mark]

(b) $-35 \div -5$

Answer 7 (1)

[1 mark]

(c) $-2 \times -3 \times -5$

$-2 \times -3 = 6$

Answer -30 (1)

[1 mark]

4

Write down all the factors of 36

$1 \times 36, 2 \times 18, 3 \times 12, 4 \times 9, 6 \times 6$ (1)

Answer $1, 2, 3, 4, 6, 9, 12, 18, 36$ (1)

[2 marks]

5

Here is a list of numbers.

1 2 9 15 23 27 31 51

(a) Write down all the prime numbers in the list.

Answer $2, 23, 31$ (1)

[1 mark]

(b) Ella says, "51 is a prime number because it is odd."

Explain why Ella is wrong.

Answer $51 = 3 \times 17$ (1)

[1 mark]

- 6 Write 126 as a product of its prime factors.

Give your answer in index form.

$$126 = 2 \times 63 = 2 \times 7 \times 9 \text{ (1)}$$

$$= 2 \times 3 \times 3 \times 7 \text{ (1)}$$

Answer $2 \times 3^2 \times 7 \text{ (1)}$

[3 marks]

- 7 Four friends, Amir, Bea, Cal and Dev, enter a table tennis contest.

Two of them are picked to play the first game.

List all the possible pairs that could play the first game.

Amir Bea, Amir Cal, Amir Dev (1)

Bea Cal, Bea Dev, Cal Dev (1)

[2 marks]

- 8 (a) Work out 12^2

Answer 144 (1)

[1 mark]

- (b) A square tile has an area of 49 cm^2

How long is each side of the tile?

Answer 7 (1) cm

[1 mark]

9

(a) Work out 5^3

$$5 \times 5 \times 5 = 25 \times 5$$

Answer 125 (1)

[1 mark]

(b) Write down the number between 30 and 70 that is a square number and also a cube number.

Answer 64 (1)

[1 mark]

10

(a) Write $6 \times 6 \times 6 \times 6 \times 6$ in index form.Answer 6^5 (1)

[1 mark]

(b) Work out 2^5 Answer 32 (1)

[1 mark]

11

(a) Find the missing power. $3^{\square} = 81$ Answer 4 (1)

[1 mark]

(b) Write these in order of size. Start with the smallest.

2^4

3^3

5^2

10^1

16, 27, 25, 10 (1)Answer $10^1, 2^4, 5^2, 3^3$ (1)

[2 marks]

12

A florist has 36 roses and 60 tulips.

She uses all of them to make identical bunches, with none left over.

What is the greatest number of bunches she can make?

$$36 = 2^2 \times 3^2 \quad 60 = 2^2 \times 3 \times 5 \quad (1)$$

Answer 12 (1)

[2 marks]

13

Mo runs one lap of a track in 6 minutes. Zak runs one lap in 8 minutes.

They start together from the start line and keep running.

After how many minutes are they next at the start line together?

$$6, 12, 18, 24 \text{ and } 8, 16, 24 \quad (1)$$

Answer 24 (1)

minutes

[2 marks]

14

$$A = 2^2 \times 3 \times 7 \quad B = 2 \times 3^2 \times 7$$

(a) Work out the highest common factor of A and B .

$$2 \times 3 \times 7$$

Answer 42 (1)

[1 mark]

(b) Work out the lowest common multiple of A and B .

$$2^2 \times 3^2 \times 7 = 36 \times 7$$

Answer 252 (1)

[1 mark]

Question	Topic	RAG
1	I can add and subtract with negative numbers	
2	I can use negative numbers in context	
3	I can multiply and divide negative numbers	
4	I can list all the factors of a number	
5	I can recognise prime and composite numbers	
6	I can write a number as a product of prime factors	
7	I can list outcomes in a systematic way	
8	I can work out squares and square roots	
9	I can work out cubes and recognise cube numbers	
10	I can write and work out powers in index notation	
11	I can find a missing power and order powers	
12	I can use the highest common factor	
13	I can use the lowest common multiple	
14	I can find the HCF and LCM from prime factors	