

Number

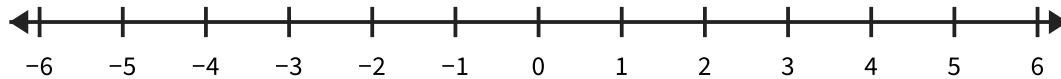
ANSWERS

No calculator | 30 minutes | Total marks: 28

Name

Class

- 1 Use the number line to help you.



- (a) Work out $-2 + 5$

Answer 3 (1) [1 mark]

- (b) Work out $1 - 4$

Answer -3 (1) [1 mark]

- 2 (a) At 7 am the temperature in a garden is -3°C .

By noon the temperature has gone up by 4°C .

What is the temperature at noon?

Answer 1 (1) $^{\circ}\text{C}$ [1 mark]

- (b) At 6 pm the temperature is 2°C .

By midnight the temperature has gone down by 6°C .

What is the temperature at midnight?

Answer -4 (1) $^{\circ}\text{C}$ [1 mark]

3

Same signs: the answer is positive. Different signs: the answer is negative.

Work out

(a) -3×5

Answer -15 (1) [1 mark]

(b) -4×-2

Answer 8 (1) [1 mark]

(c) $-20 \div 4$

Answer -5 (1) [1 mark]

4

(a) Complete the factor pairs of 24

$1 \times 24 = 24$ $2 \times \underline{\quad} = 24$ $3 \times \underline{\quad} = 24$ $4 \times \underline{\quad} = 24$

Answer $12, 8, 6$ (1) [1 mark]

(b) Write down all the factors of 24

Answer $1, 2, 3, 4, 6, 8, 12, 24$ (1) [1 mark]

5

Here is a list of numbers.

4 5 6 11 15 17 20

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

Answer $5, 11, 17$ (1) [1 mark]

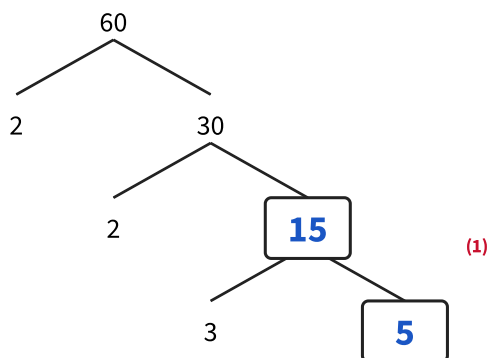
(b) Is 21 a prime number or a composite number?

Give a reason for your answer.

Answer $composite, 21 = 3 \times 7$ (1) [1 mark]

6 Here is a factor tree for 60

(a) Complete the factor tree.



[1 mark]

(b) Write 60 as a product of its prime factors.

Answer $2 \times 2 \times 3 \times 5$ (1)

[1 mark]

(c) Write your answer to part (b) in index form.

Answer $2^2 \times 3 \times 5$ (1)

[1 mark]

7 Three cards show the digits 2, 6 and 9

Ravi uses all three cards to make 3 digit numbers.

He has started a list. Complete his list.

269

296

629, 692 (1)

926, 962 (1)

[2 marks]

8 Work out

(a) 5^2

Answer 25 (1)

[1 mark]

(b) $\sqrt{36}$

Answer 6 (1)

[1 mark]

9

(a) $2^3 = 2 \times 2 \times 2 = \underline{\hspace{2cm}}$

Answer 8 (1)

[1 mark]

(b) Which number, multiplied by itself three times, makes 27?

So work out $\sqrt[3]{27}$ Answer 3 (1)

[1 mark]

10

(a) Write $4 \times 4 \times 4$ in index form.Answer 4^3 (1)

[1 mark]

(b) $3^4 = 3 \times 3 \times 3 \times 3$

Work out 3^4

9×9

Answer 81 (1)

[1 mark]

11

$20 = 2 \times 2 \times 5$

$30 = 2 \times 3 \times 5$

(a) Which two prime factors do 20 and 30 share?

Answer 2 and 5 (1)

[1 mark]

(b) Work out the highest common factor (HCF) of 20 and 30

2×5

Answer 10 (1)

[1 mark]

12

(a) Write down the first six multiples of 6

Answer 6, 12, 18, 24, 30, 36 (1)

[1 mark]

(b) The first six multiples of 9 are 9, 18, 27, 36, 45, 54

Work out the lowest common multiple (LCM) of 6 and 9

Answer 18 (1)

[1 mark]

13

Pencils come in packs of 4. Rubbers come in packs of 10.

Isla wants exactly the same number of pencils and rubbers.

What is the smallest number of pencils she can buy?

4, 8, 12, 16, 20 and 10, 20 (1)

Answer 20 (1)

[2 marks]

Question	Topic	RAG
1	I can add and subtract with negative numbers	
2	I can use negative numbers with temperatures	
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 use a factor tree to find 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 cube roots	
10	I can use index notation	
11	I can find the highest common factor	
12	I can find the lowest common multiple	
13	I can use the lowest common multiple to solve a problem	