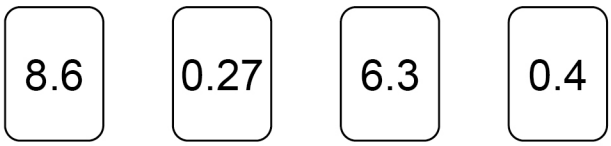
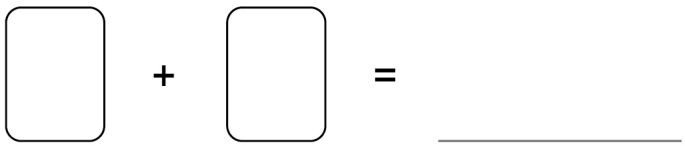
1 Here are four number cards.



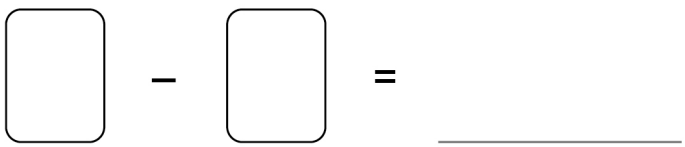
1 (a) Choose **two** of the cards to make the answer to this calculation a whole number.
Include the answer to the calculation.

[2 marks]



1 (b) Choose **two** of the cards to make the answer to this calculation as large as possible.
Include the answer to the calculation.

[2 marks]



2 Which of these numbers is three less than a square number?

Circle your answer.

[1 mark]

5 19 22 34

3 Which two numbers, when added together, make a cube number?

Circle your answer.

[1 mark]

1 and 8 2 and 4 9 and 18 8 and 64

4 Write down **all** the whole numbers that

are between 20 and 50

and

have a difference of 4 between their digits.

[2 marks]

Answer _____

5 The table shows the cost of hiring a concrete mixer for up to 5 days.

Number of days	1	2	3	4	5
Cost	£14	£24	£34	£44	£54

Eva hires the concrete mixer for 5 days.

She says,

"The rate is £14 per day because the cost for 1 day is £14"

Is she correct?

Give a reason for your answer.

[2 marks]

6 x is a **negative** number.

Which statement is correct?

Tick **one** box.

[1 mark]

☐ $x + 10$ is always positive

☐ $x + 10$ is always negative

☐ $x + 10$ cannot be zero

☐ $x + 10$ could be positive or negative or zero

7 p is a positive number.

n is a negative number.

For each statement, tick the correct box.

[4 marks]

	Always true	**Sometimes true**	**Never true**
$p + n$ is positive	☐	☐	☐
$p - n$ is positive	☐	☐	☐
$p^2 + n^2$ is positive	☐	☐	☐
$p^3 \div n^3$ is positive	☐	☐	☐

8 Circle the largest number.

[1 mark]

4.5061 4.5 4.516 4.56

9 Circle the expression that means half the value of x

[1 mark]

$\frac{x}{2}$ $\frac{2}{x}$ $\frac{1}{2} - x$ $x - \frac{1}{2}$

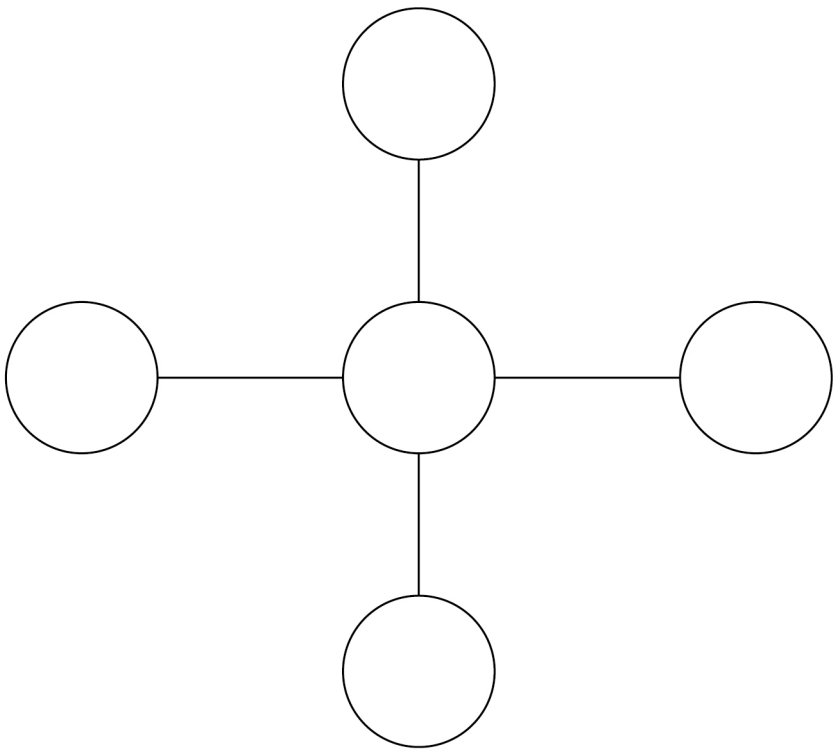
10 Put the numbers 1, 2, 3, 4 and 6 into the circles so that

each line of three numbers multiplies to 12

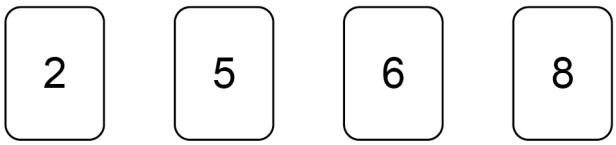
the total of the vertical line is one more than the total of the horizontal line.

Use each number once.

[2 marks]

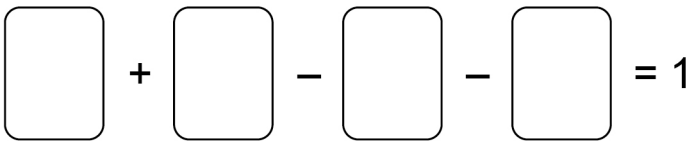


11 Here are four number cards.

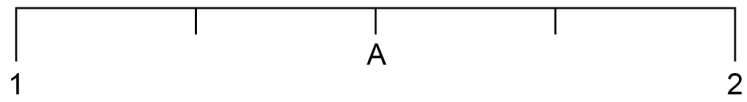


11 (a) Use each card once to make this calculation correct.

[1 mark]



12 Here is a number line.



Which number is at A?

Circle your answer.

[1 mark]

1.2 1.4 1.5 1.8

13 Here is an expression $5a + 7b + 9c$

Which is the second term?

Circle your answer.

[1 mark]

a 7 $7b$ 9

14 Sue is working with 2-digit numbers.

She multiplies the digits together to get an answer.

> For 63, she multiplies 6 by 3
> so 63 gives an answer of 18

14 (a) Write down a different 2-digit number that gives an answer of 18

[1 mark]

Answer _____

14 (b) Write down a 2-digit number that gives an answer of 0

[1 mark]

Answer _____

14 (c) Write down a 2-digit number that gives an answer **greater** than 70

[1 mark]

Answer _____

15 Here is a list of numbers.

14 9 20 29 3 45 33

15 (a) Which number in the list is a multiple of 4 ?

[1 mark]

Answer _____

15 (b) Which number in the list is a square number?

[1 mark]

Answer _____

15 (c) Which **two** numbers in the list have a total of 43 ?

[1 mark]

Answer _____ and _____

15 (d) Work out

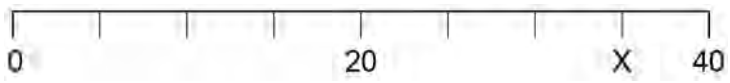
largest number in the list ÷ smallest number in the list

[1 mark]

Answer _____

Turn over for the next question

16 (a) Here is a number line.

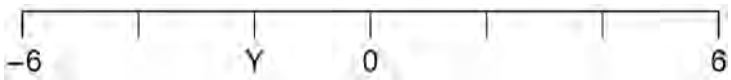


What number is at X?

[1 mark]

Answer _____

16 (b) Here is a different number line.



What number is at Y?

[1 mark]

Answer _____

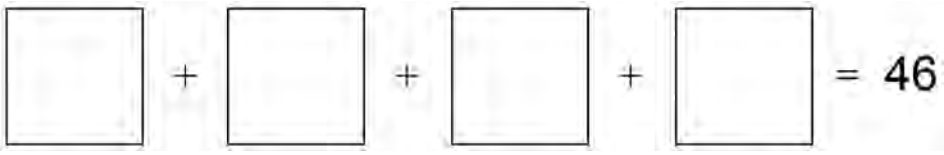
17 (a) Complete the boxes using

two **different** even numbers

and

two **different** odd numbers.

[2 marks]



17 (b) Complete the boxes using

a factor of 12

and

a factor of 40

[2 marks]

$\square \times \square = 30$

17 (c) Complete the boxes using

a square number

and

a prime number.

[2 marks]

$\square \div \square = 18$

18 n is an odd number.

Why is $n(n + 1)$ always an even number?

[2 marks]

19 Circle the lowest of these temperatures.

[1 mark]

–2.1°C 0.4°C –5°C 1°C

20 Here are two sets of numbers.

Set A	2	12	13	27
Set B	1	15	16	30

One number from Set A is swapped with one number from Set B.
The total of the numbers in each set is now the same.

Which two numbers are swapped?

[2 marks]

Answer _____ and _____

21 (a) Here is a list of four numbers.

6.92 7.27 7.18 7.14

Use **one** number from the list to complete each statement.

[2 marks]

The number closest in value to 7 is _____

The number that rounds to 7.2 to 1 decimal place is _____

21 (b) Here is a list of six numbers.

–10 –5 –2 4 6 10

Use **two** numbers from the list to complete each statement.

[2 marks]

Two numbers that **add** to make –1 are _____ and _____

Two numbers that **multiply** to make 20 are _____ and _____

22 A code has five **different** digits written in order, starting with the smallest.

The last digit is the **only** square number.

The middle digit is the **only** even number.

Work out the code.

[3 marks]

Answer _____ _____ _____ _____ _____

23 Complete each statement using **one** of these symbols.

$<$ $=$ $>$

[3 marks]

2.54 _____ 2.508

0.25 _____ $\frac{1}{4}$

2 _____ $\frac{5}{2}$