Monday 29th June 2020 Y4 Maths

Good morning Y4s. I hope you had a good weekend.

Today, I would like you to do the final part of your assessment - **Reasoning Paper 2**

Please complete the questions below independently. An adult can read the questions to you (but not the numbers or symbols).

There are 22 questions altogether. They get progressively harder. See how many you can complete in 40 minutes.

Don't forget to read the questions carefully and try to understand what they are asking before deciding which calculations you will need to solve them.

Use jottings – especially bar models - to help you. Remember, you get points for working out (even if you don't get the final answer right).

Good luck. The answers are at the end – no peeping! Please let me know how you got on.

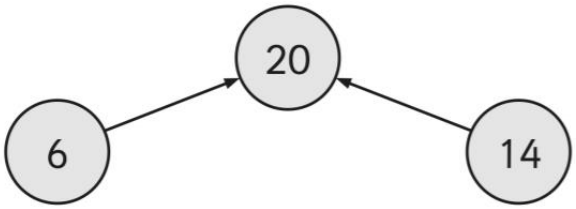
Here are the names of the characters in the questions

Emma Jack Malik

If you finish early, check **MyMaths** and **Sumdog** for unfinished tasks or practise the **times tables check at timestables.co.uk**

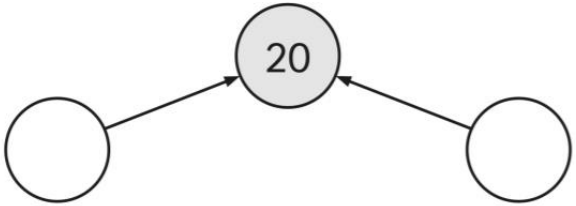
Question 1

Look at the **number diagram** below.



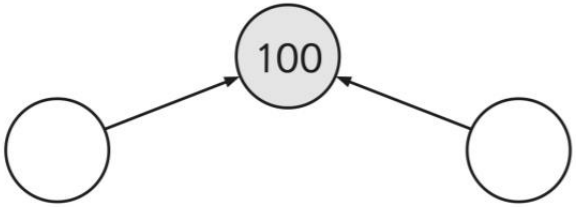
The bottom two numbers are added together to give the number on the top.

Write **two different numbers** on the diagram below that **add** together to make 20.



1 mark

Complete the diagram below.



1 mark

Question 2

Draw the correct **sign** in **each** box.

Choose from:

<	>

15kg ☐ 15g

25ml ☐ 25l

30cm ☐ 30m

1 mark

Question 3

Look at the number sentence below.

36 + 25 = 61

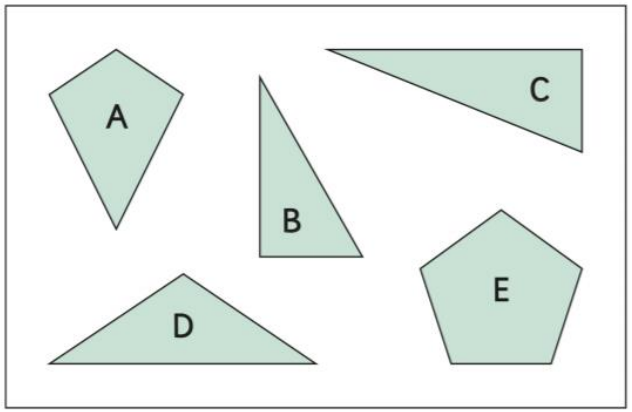
Use the **same numbers** to write a **subtraction number sentence**.

☐ – ☐ = ☐

1 mark

Question 4

Look at the shapes below.



Write the **letters** of **all** the shapes that have a **right angle**.

1 mark

Complete the sentences.

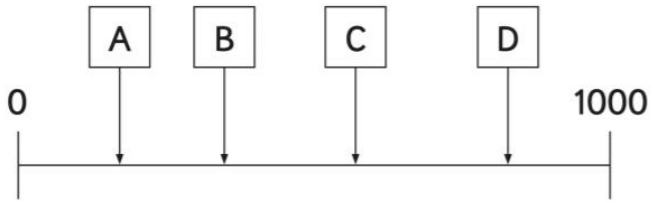
Shape **A** is called a _____.

Shape **E** is called a _____.

2 marks

Question 5

Here is a number line.



Write the **letter** that is closest to 650.

1 mark

Question 6

Draw around $\frac{1}{6}$ of the chocolates.

1 mark

Question 7

Look at the clock.

What time is shown on the clock?

1 mark

What time will it be when 20 **minutes** have passed?

1 mark

Question 8

Look at the table below. It shows the sports that some children play at school.

	Football	Hockey	Netball	Rugby	Tennis
Emma	✓	✓	✓	X	✓
Harry	✓	X	✓	✓	X
Ling	✓	✓	X	✓	✓
Malik	✓	✓	X	✓	✓
Tom	X	X	✓	✓	X

Write the **names of the children** that take part in **more** than three sports?

1 mark

Question 9

Emma and 6 friends go to the cinema.

The cinema tickets cost £4.00 **each**.

What will the **total cost** of the cinema tickets be?

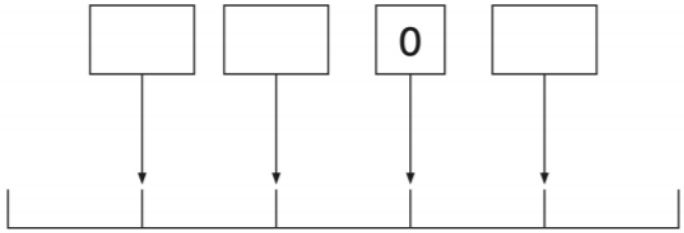
£

1 mark

Question 10

Use the numbers on the digit cards to complete the number line.

5 -5 -10



1 mark

Question 11

Complete the number sentence.

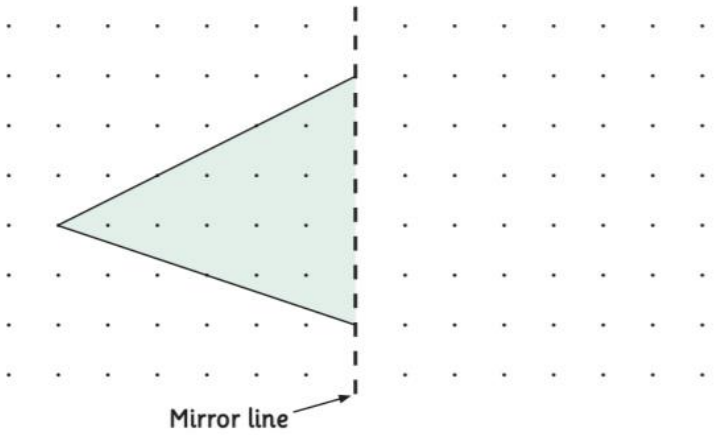
4000 + ☐ + 30 + 7 = 4537

1 mark

Question 12

Draw the **reflection** of the triangle in the mirror line.

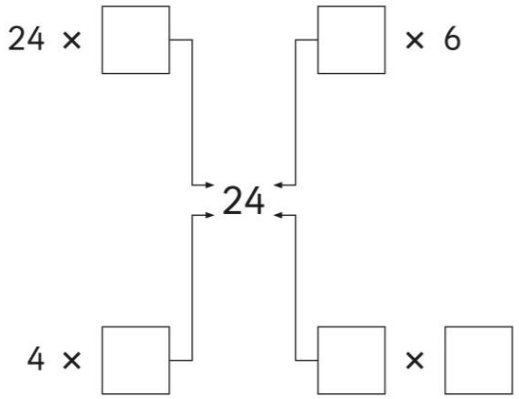
Use a ruler.



1 mark

Question 13

Use **different numbers** in **each** box to complete the diagram below.



2 marks

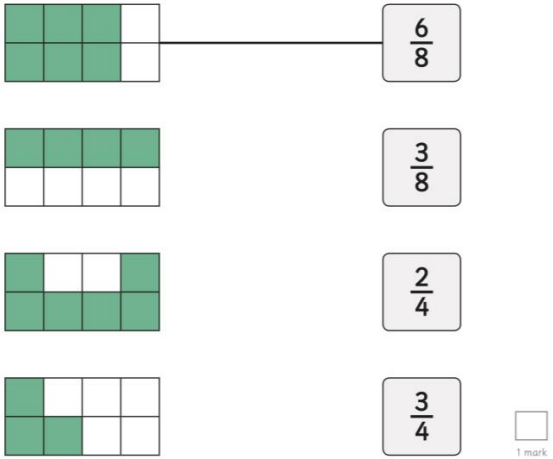
Question 14

Look at the shapes.

A **fraction** of **each** shape is shaded.

Match **each** shape to its **equivalent fraction**.

One has been done for you.



1 mark

Question 15

Complete the number sentences below.

25 × 10 = ☐

25 ÷ 10 = ☐

2 marks

Question 16

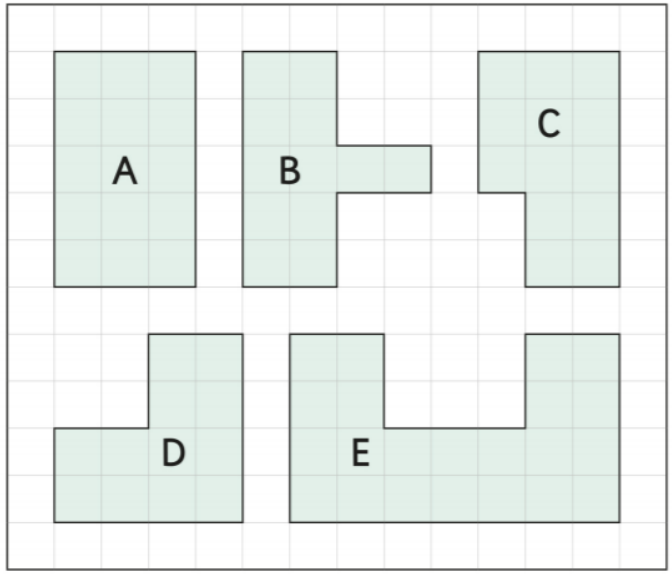
Complete the table.

Fraction	Decimal
	0.5
$\frac{1}{4}$	
	0.75
$\frac{1}{10}$	

2 marks

Question 17

Look at the shapes on the **1cm square grid** below.



What is the **area** of shape B?

cm^2

1 mark

Which shape has the **largest area**?

1 mark

Question 18

The table below shows the cost of some sportswear.

Biking equipment			
			
Helmet £14.25	Glasses £5.75	Shirt £6.95	Gloves £3.85

Emma spent £9.60

Which **2** items did she buy?

and

1 mark

Malik buys a shirt and a pair of gloves.
He pays with a £20 note.

How much **change** will he get?

£

2 marks

Question 19

A sheet has 70 stickers on it.
9 children take 4 stickers **each**.

How many **stickers** are left on the sheet?

stickers

2 marks

Question 20

Emma said $\frac{2}{4} + \frac{2}{4} = \frac{4}{8}$

True or false?

Circle the correct answer.

True/false

Explain how you know this.

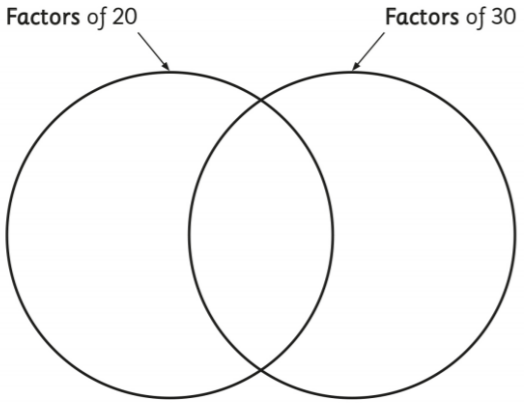
1 mark

Question 21

Look at the **Venn diagram** below.

Write **all five** numbers in the correct place on the diagram.

5 6 10 4 3



2 marks

Question 22

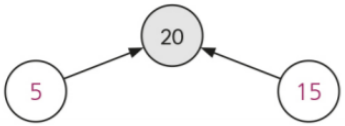
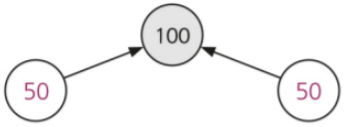
Malik chooses a number.

He adds 14 to the number.
Then, he divides his answer by 2 and adds 2.
His answer is 16.

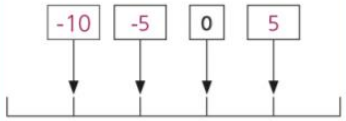
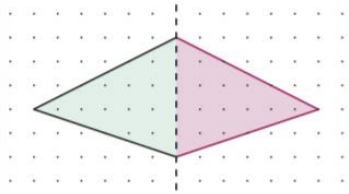
What was the number he **started** with?

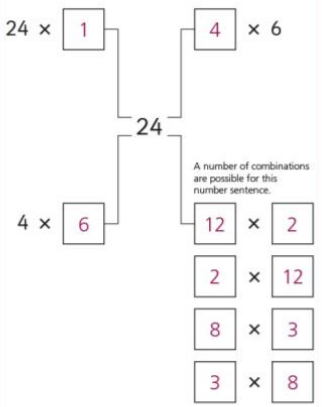
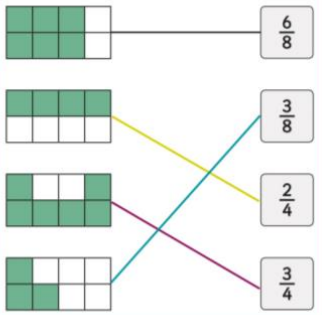
2 marks

Answers

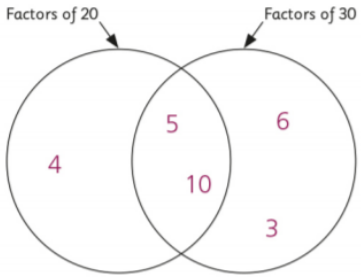
1	A number of combinations are possible. For example: 	Award **one mark** for any combination of two numbers (not 6 and 14) that add together to make 20. Any of the following combinations are acceptable: • 20 + 0/0 + 20 • 1 + 19/19 + 1 • 2 + 18/18 + 2 • 3 + 17/17 + 3 • 5 + 15/15 + 5 • 7 + 13/13 + 7 • 8 + 12/12 + 8 • 9 + 11/11 + 9 • 10 + 10	1
1	A number of combinations are possible. For example: 	Award **one mark** for any **combination of two numbers** that add together to make 100. Here are a just a few acceptable combinations: • 100 + 0/0 + 100 • 10 + 90/90 + 10 • 20 + 80/80 + 20 • 30 + 70/70 + 30 • 40 + 60/60 + 40 • 50 + 50 or • 95 + 5/5 + 95 • 25 + 75/75 + 25 • 55 + 45/45 + 55	1
2	Signs used as shown: 15kg [>] 15g 25ml [<] 25l 30cm [<] 30m	**All three signs** must be provided, in the correct boxes, for **one mark** to be awarded.	1
3	Numbers used as shown: 61 – 25 = 36 Or 61 – 36 = 25	Award **one mark** for either correct answer. The child must have used the numbers: **36, 25** and **61** correctly for **one mark** to be awarded.	1

	Answer	Marking guidance	Marks
4	B and C or B/C or B, C	Award **one mark** for the correct answer. You may award the mark for an answer that has been written in either lower or upper case letters.	1
	Shape A is called a kite. Shape E is called a pentagon.	**Both names** must be provided, in the correct boxes, for **two marks** to be awarded. Award **one mark** for **each** correct answer.	2
5	C	Award **one mark** for the correct answer. You may award the mark for an answer that has been written in either lower case or upper case letters.	1
6	2 chocolates drawn around. For example: 	**2 chocolates** must be indicated for **one mark** to be awarded. Any 2 chocolates can be indicated. You may accept any other clear way that the child has indicted 2 chocolates (e.g. a tick, a cross, a line through them).	1
7	2:45 or quarter to 3 or 14:45	You may award **one mark** for any unambiguous indication of the correct answer (e.g. 2:45am, 2:45pm, 14:45pm, 45 minutes past 2, 15 minutes to 3, 2.45, 02:45, 2-45, 2,45, 0245, 2 45).	1
	5 past 3 or 3:05 or 15:05	You may award **one mark** for any unambiguous indication of the correct answer (e.g. 3:05am, 3:05pm, 15:05pm, 5 minutes past 3, 3.05, 03:05, 3-05, 3,05, 0305, 3 05).	1
8	Emma, Ling and Malik	**All three names** must be provided, in any order, for **one mark** to be awarded.	1
9	£28	Award **one mark** for any unambiguous indication of the correct answer (e.g. £28.00p, £28.00, twenty eight, £28,00, £28:00, £28-00, £28 00).	1

10	Numbers provided as shown: 	**All three numbers** must be provided, in the correct boxes, for **one mark** to be awarded.	1
11	500	Award **one mark** for the correct answer.	1
12	Shape drawn as shown: 	You may accept slight inaccuracies in the child's drawing if their intention is clear. **Do not** penalise drawings done without a ruler, provided the child's intention is clear.	1

13	Numbers provided as shown: 	**All four multiplication number sentences** must be correct for **two marks** to be awarded. You may award **one mark** for three number sentences completed correctly.	2
14	Shapes and fractions matched as shown: 	**All three shapes** must be matched correctly to their equivalent fractions for **one mark** to be awarded.	1
15	Answers provided as shown: 25 × 10 = 250 25 ÷ 10 = 2.5	**Both answers** must be provided, in the correct boxes, for **two marks** to be awarded. Award **one mark** for **each** correct answer.	2

16	Table completed as shown: **Fraction** / **Decimal** $\frac{1}{2}$ — 0.5 $\frac{1}{4}$ — 0.25 $\frac{3}{4}$ — 0.75 $\frac{1}{10}$ — 0.10	**All four answers** must be provided, in the correct boxes, for **two marks** to be awarded. You may award **one mark** for two or three correct answers.	2
17	$12cm^2$	Award **one mark** for the correct answer.	1
	E	Award **one mark** for the correct answer. You may award the mark for an answer that has been written in either lower case or upper case letters.	1

18	Glasses and gloves or £5.75 and £3.85	**Both answers** must be provided, in any order, for **one mark** to be awarded. You may accept any other clear way that the child has indicated the correct items (e.g. pictorial representation in the answer boxes). For example:  and 	1
	£9.20 or £9.20p or 9.20	Award **two marks** for any unambiguous indication of the correct answer (e.g. £9.20p, £9,20, £9:20, £9-20, £0920, £9 20; with a clear space between the 9 and the 20). If the child's answer is incorrect, you may award **one mark** for evidence of appropriate working out.	2
19	34 stickers	Award **two marks** for the correct answer. If the child's answer is incorrect, you may award **one mark** for evidence of appropriate working out.	2
20	True/ (false)	Award **one mark** for an answer that demonstrates the child understands how to add fractions with the same denominator. For example: ⅛ is the wrong answer because: $\frac{2}{4} + \frac{2}{4} = \frac{2+2}{4} = \frac{4}{4}$ or 1	1
21	Venn diagram completed as shown: 5 6 10 4 3  	**All five numbers** must be placed correctly in the Venn diagram for **two marks** to be awarded. You may award **one mark** for three or four numbers placed correctly.	2
22	14	Award **two marks** for the correct answer. If the child's answer is incorrect, you may award **one mark** for evidence of appropriate working out. If the child's answer is incorrect, you may award the mark if they have demonstrated that they can work backwards using inverse operations (e.g. 16 – 2 = 14 14 × 2 = 28 28 – 14 = wrong answer or 16 – 2 = 14 14 × 2 = wrong answer wrong answer – 14 = child's incorrect answer).	2