

2023 national curriculum tests

# Key stage 1

## Mathematics

### Paper 2: reasoning

First name	
Middle name	
Last name	

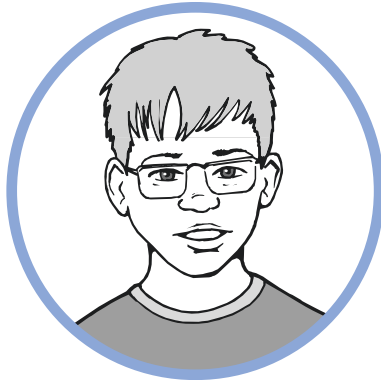
Total marks	
-------------	--



**Ajay**



**Amy**



**Ben**



**Kemi**



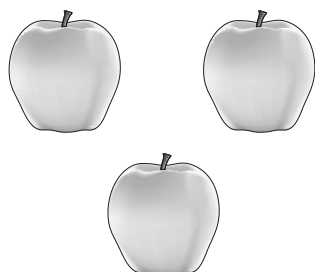
**Sam**



**Sita**

## Practice question

**Sita**

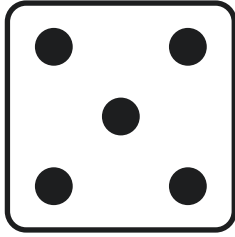


**Amy**



apples

1



5

3

2

7



1 mark

2

6

2

8

3

--	--



1 mark

3



  
1 mark

4



oranges



1 mark

5



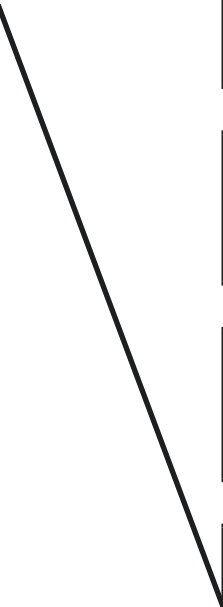
1 mark

6

Match the words to the correct numerals.

One is done for you.

ninety-nine	16
sixteen	60
forty-three	43
	99
	34



1 mark



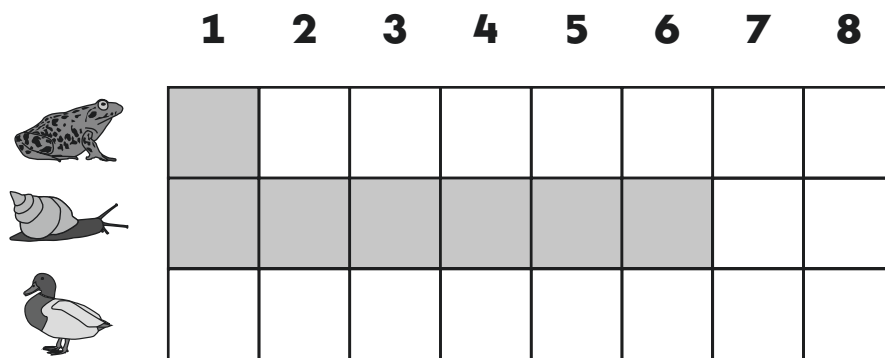
7

This block diagram shows how many animals are in a pond.

There are **4 ducks** in the pond.



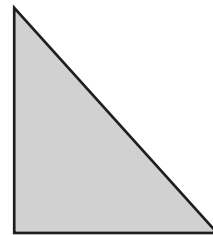
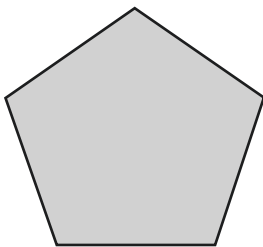
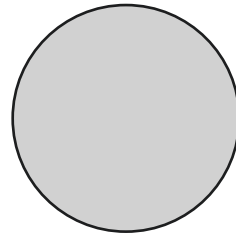
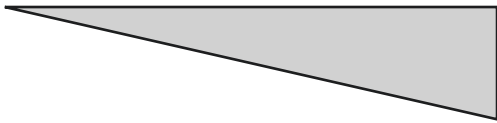
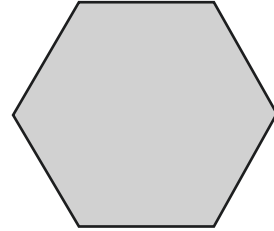
Complete the block chart.



1 mark

8

Tick the **two** shapes with the same number of sides.








1 mark

9

Each object looks like a **cuboid**, **cone** or **cylinder**.

Complete the table.

One is done for you.

Object	Cuboid	Cone	Cylinder
			✓
			
			
			
			



1 mark

10

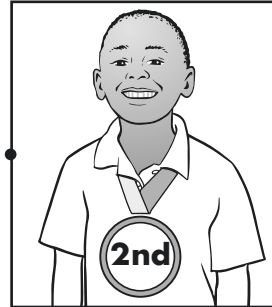
Four children run a race.

The medals show their finishing position.

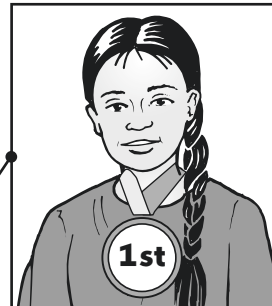
Match each time to the child's position.

One is done for you.

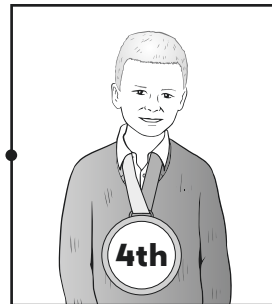
11 minutes



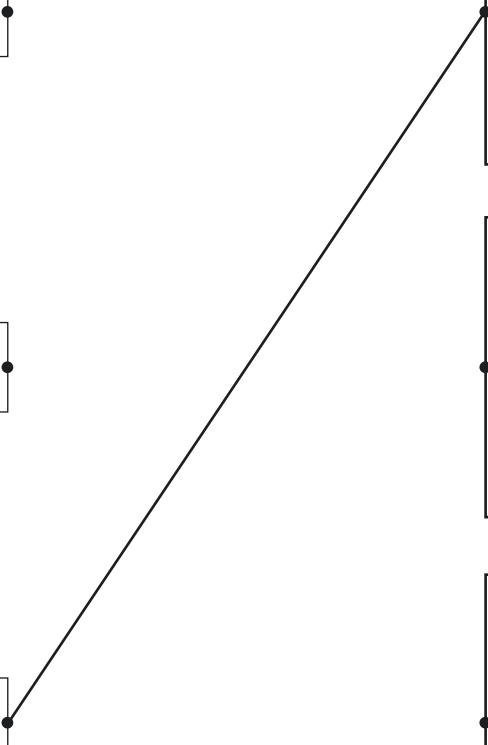
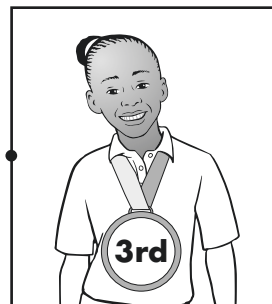
15 minutes



13 minutes



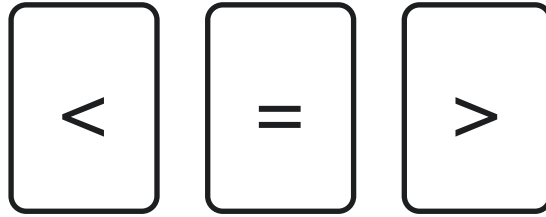
10 minutes



1 mark

**11**

Look at these signs.



Write the correct sign in each box.

$$21 \quad \boxed{\phantom{<}} \quad 12$$

$$48 \quad \boxed{\phantom{<}} \quad 64$$

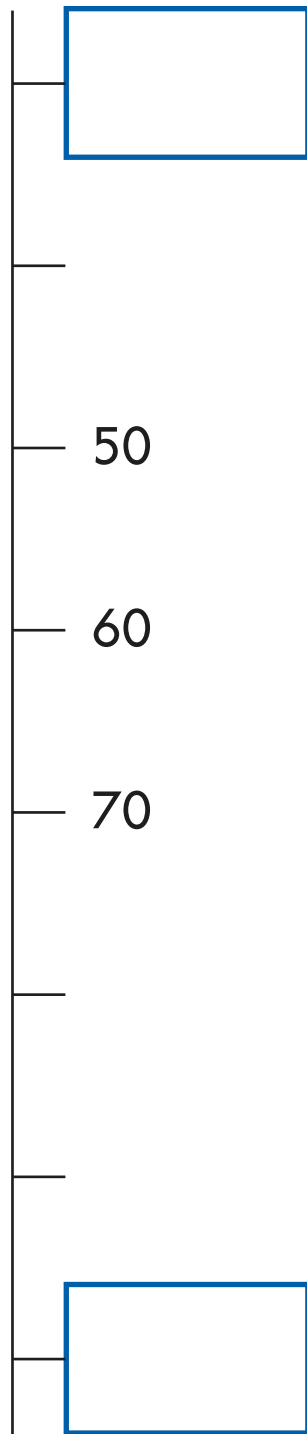
$$55 \quad \boxed{\phantom{<}} \quad 55$$



1 mark

12

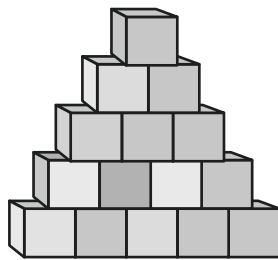
Write the correct number in each box on the number line.



1 mark

**13** Ben wants to build a tower with **15** blocks.

He only has **9** blocks.



How many **more** blocks does Ben need?

blocks

○  
1 mark

**14** Match **all** the pairs of numbers that add to **20**

One is done for you.

<input type="text" value="5"/>	<input type="text" value="13"/>
<input type="text" value="7"/>	<input type="text" value="11"/>
<input type="text" value="4"/>	<input type="text" value="15"/>
<input type="text" value="9"/>	<input type="text" value="16"/>




A line connects the box with the number 5 to the box with the number 15.

○  
1 mark

15

Ben draws a tally chart of the birds he sees in his garden.

Complete Ben's tally chart.

Bird	Tally of birds	Number of birds
robin 		3
blue tit 		
sparrow 		10

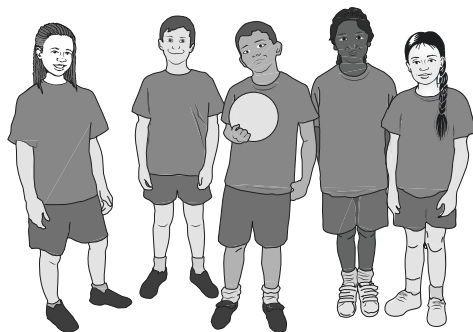


1 mark

16

6 teams play football.

Each team has 5 children.



How many children play football **altogether**?

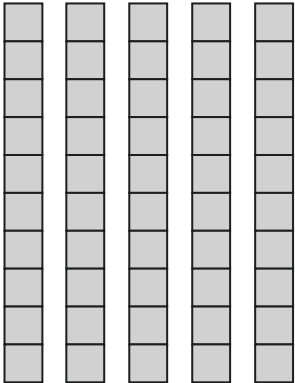
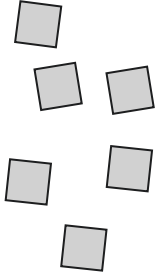
children



1 mark



17

tens	ones
	

Kemi uses tens and ones to show **56**

She adds **2 more tens**.

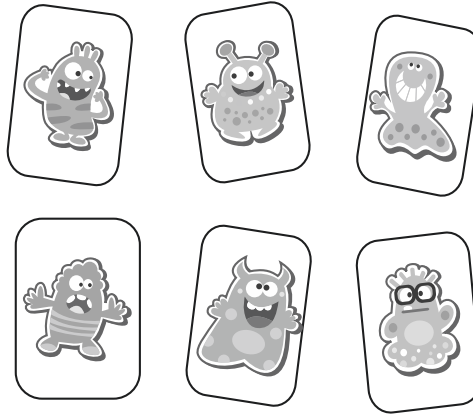
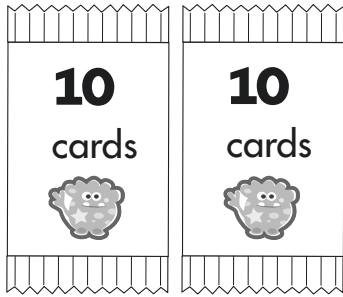
What is her **new** number?



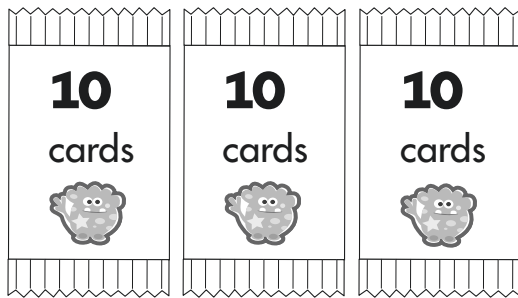
1 mark

18

Ben has **26** cards.



Sita has **32** cards.



How many cards do Ben and Sita have **altogether**?

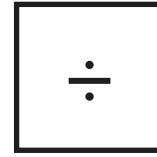
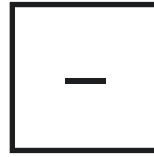
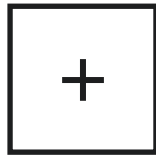
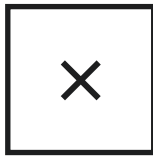
cards



1 mark

**19**

Look at these signs:



Write one sign in each box to make the number sentences correct.

One is done for you.

$$5 \boxed{\times} 4 = 20$$

$$8 \boxed{\phantom{\times}} 2 = 16$$

$$30 \boxed{\phantom{\times}} 10 = 3$$

$$7 \boxed{\phantom{\times}} 6 = 13$$



2 marks

**20**

Write the missing numbers to continue the number pattern.

$$7 + 3 = 10$$

$$17 + 3 = 20$$

$$\boxed{\phantom{00}} + 3 = 30$$

$$\boxed{\phantom{00}} + 3 = \boxed{\phantom{00}}$$

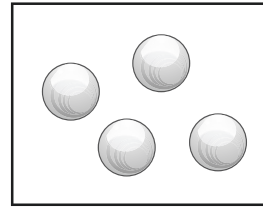
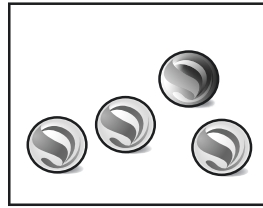
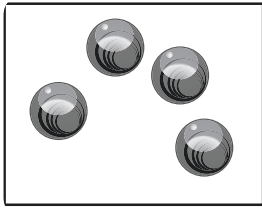
$$47 + 3 = 50$$



1 mark

**21**

These marbles are sorted into groups.



Circle **two** calculations that show the total number of marbles.

$$3 \times 3$$

$$3 \times 4$$

$$4 + 4 + 4$$

$$3 + 3 + 3$$



1 mark

22

Here is a calculation.

$$\frac{1}{4} \text{ of } 8 = \boxed{2}$$

Now complete the calculations below.

$$\frac{2}{4} \text{ of } 8 = \boxed{\phantom{00}}$$

$$\frac{3}{4} \text{ of } 8 = \boxed{\phantom{00}}$$



1 mark

23

This is Ben's money.



This is Sita's money.



How much **more** money does Ben have than Sita?

p



1 mark

24

Sam has some toy cars.

The picture shows  $\frac{1}{2}$  of his cars.



How many toy cars does Sam have **altogether**?


cars



1 mark

25

Look at the two calculations.

Each  is worth the **same** number.

Write the answer to the second calculation.

$$\star + \star = \boxed{20}$$

$$\star \times \star = \boxed{\phantom{00}}$$



1 mark



26

Sam buys a book for **£17**

He pays with **four £5** notes.



How much change does Sam get?

£



1 mark

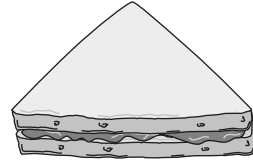
27

Amy makes **24** sandwiches for a party.

**9** children come to the party.

Each child eats **2** sandwiches.

How many sandwiches are **left**?



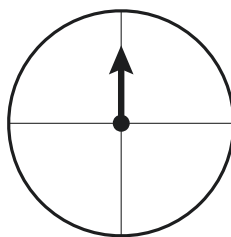
Show  
your  
working

sandwiches

2 marks

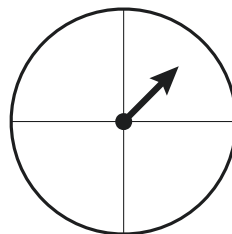
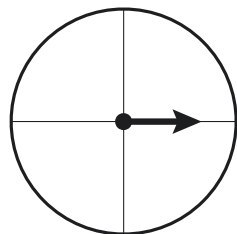
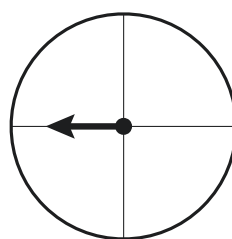
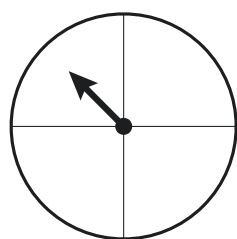
28

Here is a spinner.



The arrow moves a  $\frac{1}{4}$  turn **anti-clockwise**.

Tick the new position of the arrow.



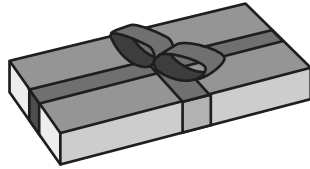
1 mark

29

Kemi sends a card, a gift and a letter.



card  
**32 g**



gift  
**47 g**



letter  
**? g**

Altogether the card, gift and letter weigh **100** grams.

How much does the **letter** weigh?

Show  
your  
working

grams

2 marks

30

Write a digit in each box to complete this number sentence.

$$\begin{array}{|c|c|} \hline 3 & \square \\ \hline \end{array} + \begin{array}{|c|c|} \hline \square & 2 \\ \hline \end{array} = 50$$

1 mark

31

Sita solved this calculation.

$$16 - 4 = 12$$

Circle **all** of the calculations that show how Sita could check her answer.

$$16 + 4$$

$$4 + 12$$

$$4 + 16$$

$$12 + 4$$

1 mark

32

Here is part of a number pattern.

The numbers increase by **five** each time.

2      7      12      17      22

Write the next **even** number in the pattern.



1 mark

End of test

**[BLANK PAGE]**

Please do not write on this page.



2023 key stage 1 mathematics

Paper 2: reasoning

Print version product code: STA/23/8708/p ISBN: 978-1-78957-622-1

Electronic PDF version product code: STA/23/8708/e ISBN: 978-1-78957-642-9

### **For more copies**

Additional printed copies of this booklet are not available. It can be downloaded from <https://www.primaryassessmentgateway.education.gov.uk> during May 2023, or afterwards from <https://www.gov.uk/government/collections/national-curriculum-assessments-practice-materials>.

© Crown copyright 2023

### **Re-use of Crown copyright in test materials**

Subject to the exceptions listed below, the test materials on this website are Crown copyright and you may re-use them (not including logos) free of charge in any format or medium in accordance with the terms of the Open Government Licence v3.0 which can be found on the National Archives website and accessed via the following link: [www.nationalarchives.gov.uk/doc/open-government-licence](http://www.nationalarchives.gov.uk/doc/open-government-licence). When you use this information under the Open Government Licence v3.0, you should include the following attribution: 'Contains material developed by the Standards and Testing Agency for 2023 national curriculum assessments and licensed under Open Government Licence v3.0' and where possible provide a link to the licence.



### **Exceptions – third-party copyright content in test materials**

You must obtain permission from the relevant copyright owners, as listed in the '2023 key stage 1 tests copyright report', for re-use of any third-party copyright content which we have identified in the test materials, as listed below. Alternatively, you should remove the unlicensed third-party copyright content and/or replace it with appropriately licensed material.

### **Third-party content**

These materials contain no third-party copyright content.

If you have any queries regarding these test materials, contact the national curriculum assessments helpline on 0300 303 3013 or email [assessments@education.gov.uk](mailto:assessments@education.gov.uk).