Mathematics

Paper 2: reasoning

<table>
<thead>
<tr>
<th>First name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle name</td>
<td></td>
</tr>
<tr>
<td>Last name</td>
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</tr>
</tbody>
</table>

Total marks
Ajay

Amy

Ben

Kemi

Sam

Sita
Practice question

Sita

Amy

apples
Look at the number of spots on this dice. [Pause]
Circle the number that is two less than the number on the dice.

1 mark
4

oranges

5

1 mark

1 mark
Match the words to the correct numerals.

One is done for you.

- ninety-nine: 99
- sixteen: 16
- forty-three: 43
This block diagram shows how many animals are in a pond.

There are 4 ducks in the pond.

Complete the block chart.
Tick the **two** shapes with the same number of sides.
Each object looks like a **cuboid, cone** or **cylinder**.

Complete the table.

One is done for you.

<table>
<thead>
<tr>
<th>Object</th>
<th>Cuboid</th>
<th>Cone</th>
<th>Cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Cuboid" /></td>
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<td><img src="image" alt="Cuboid" /></td>
<td><img src="image" alt="Cuboid" /></td>
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<td><img src="image" alt="Cone" /></td>
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<td><img src="image" alt="Cylinder" /></td>
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<td><img src="image" alt="Cone" /></td>
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<td><img src="image" alt="Cone" /></td>
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</tr>
</tbody>
</table>
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   12

48   64

55   55

1 mark
Write the correct number in each box on the number line.
13 Ben wants to build a tower with 15 blocks.

He only has 9 blocks.

How many more blocks does Ben need?

blocks

14 Match all the pairs of numbers that add to 20

One is done for you.

5
7
4
9
13
11
15
16
15 Ben draws a tally chart of the birds he sees in his garden.

Complete Ben’s tally chart.

<table>
<thead>
<tr>
<th>Bird</th>
<th>Tally of birds</th>
<th>Number of birds</th>
</tr>
</thead>
<tbody>
<tr>
<td>robin</td>
<td>⌈า</td>
<td>3</td>
</tr>
<tr>
<td>blue tit</td>
<td>⌈า ⌈า ⌈а ⌈а</td>
<td></td>
</tr>
<tr>
<td>sparrow</td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

16 6 teams play football.

Each team has 5 children.

How many children play football altogether?

[Box for answer: ___ children]
Kemi uses tens and ones to show **56**

She adds **2 more tens**.

What is her **new** number?
18

Ben has 26 cards.

<table>
<thead>
<tr>
<th>10 cards</th>
<th>10 cards</th>
</tr>
</thead>
</table>

Sita has 32 cards.

<table>
<thead>
<tr>
<th>10 cards</th>
<th>10 cards</th>
<th>10 cards</th>
</tr>
</thead>
</table>

How many cards do Ben and Sita have altogether?

[ ] cards
19. Look at these signs:

\[ \times \quad + \quad - \quad \div \]

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

One is done for you.

5 \[ \times \] 4 = 20

8 \ [ \ ] 2 = 16

30 \ [ \ ] 10 = 3

7 \ [ \ ] 6 = 13

2 marks
Write the missing numbers to continue the number pattern.

\[
\begin{align*}
7 + 3 &= 10 \\
17 + 3 &= 20 \\
\underline{\text{ } } + 3 &= 30 \\
\underline{\text{ } } + 3 &= \underline{\text{ } } \\
47 + 3 &= 50
\end{align*}
\]
These marbles are sorted into groups.

Circle two calculations that show the total number of marbles.

\[
\begin{align*}
3 \times 3 \\
3 \times 4 \\
4 + 4 + 4 \\
3 + 3 + 3
\end{align*}
\]
Here is a calculation.

\[ \frac{1}{4} \text{ of } 8 = 2 \]

Now complete the calculations below.

\[ \frac{2}{4} \text{ of } 8 = \]

\[ \frac{3}{4} \text{ of } 8 = \]
This is Ben’s money.

This is Sita’s money.

How much more money does Ben have than Sita?
24 Sam has some toy cars.

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

How many toy cars does Sam have altogether?

25 Look at the two calculations.

Each \( \star \) is worth the same number.

Write the answer to the second calculation.

\[ \star + \star = 20 \]

\[ \star \times \star = \square \]
Sam buys a book for £17

He pays with four £5 notes.

How much change does Sam get?

£
Amy makes 24 sandwiches for a party.

9 children come to the party.

Each child eats 2 sandwiches.

How many sandwiches are left?
Here is a spinner.

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

Tick the new position of the arrow.
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.

\[ 3 \boxed{} + \boxed{} 2 = 50 \]

1 mark

31 Sita solved this calculation.

\[ 16 - 4 = 12 \]

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

\[ \boxed{} 16 + 4 \quad \boxed{} 4 + 12 \]

\[ \boxed{} 4 + 16 \quad \boxed{} 12 + 4 \]

1 mark
Here is part of a number pattern.

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

\[
\begin{array}{cccc}
2 & 7 & 12 & 17 \\
\end{array}
\]

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

\[
\begin{array}{cccc}
& & & \\
\end{array}
\]

End of test
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