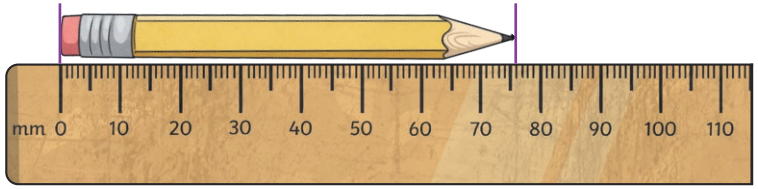
Name: _____ Date: _____

1. a) Measure the length of the pencil in mm.



not to scale

b) Ajani sharpened off 15mm.
What length is the pencil now?

2 marks

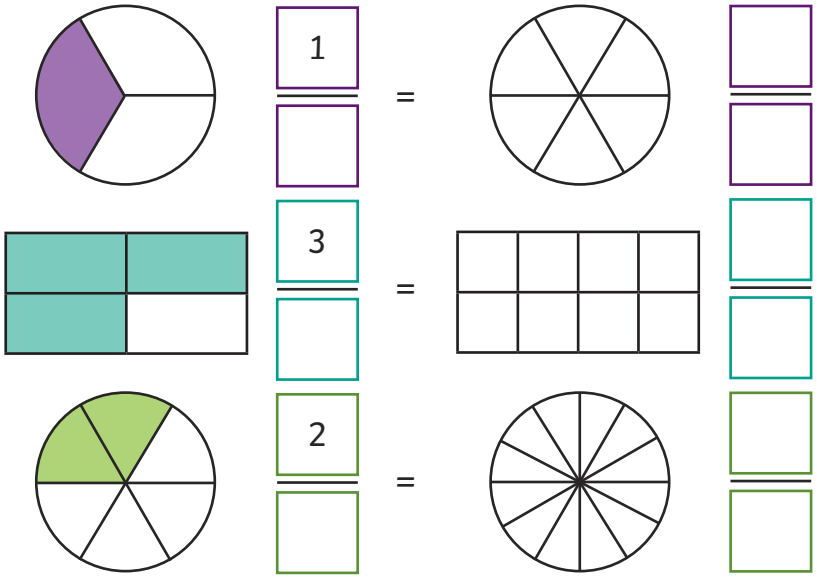
2. 3 children are given 12 sweets each.
How many sweets are there altogether?
Circle the correct calculation below and find the answer.

12 + 3 = ☐ 3 × 12 = ☐

12 ÷ 3 = ☐ 12 − 3 = ☐

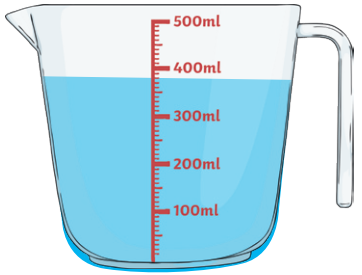
1 mark

3. Shade in each shape to show the equivalent fraction.
Then, write the equivalent fraction shown.

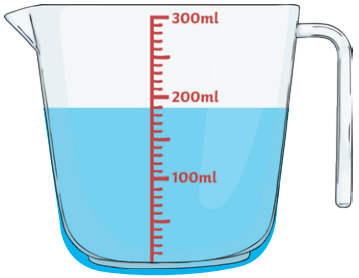


3 marks

4. a) How much water is in each container?



ml

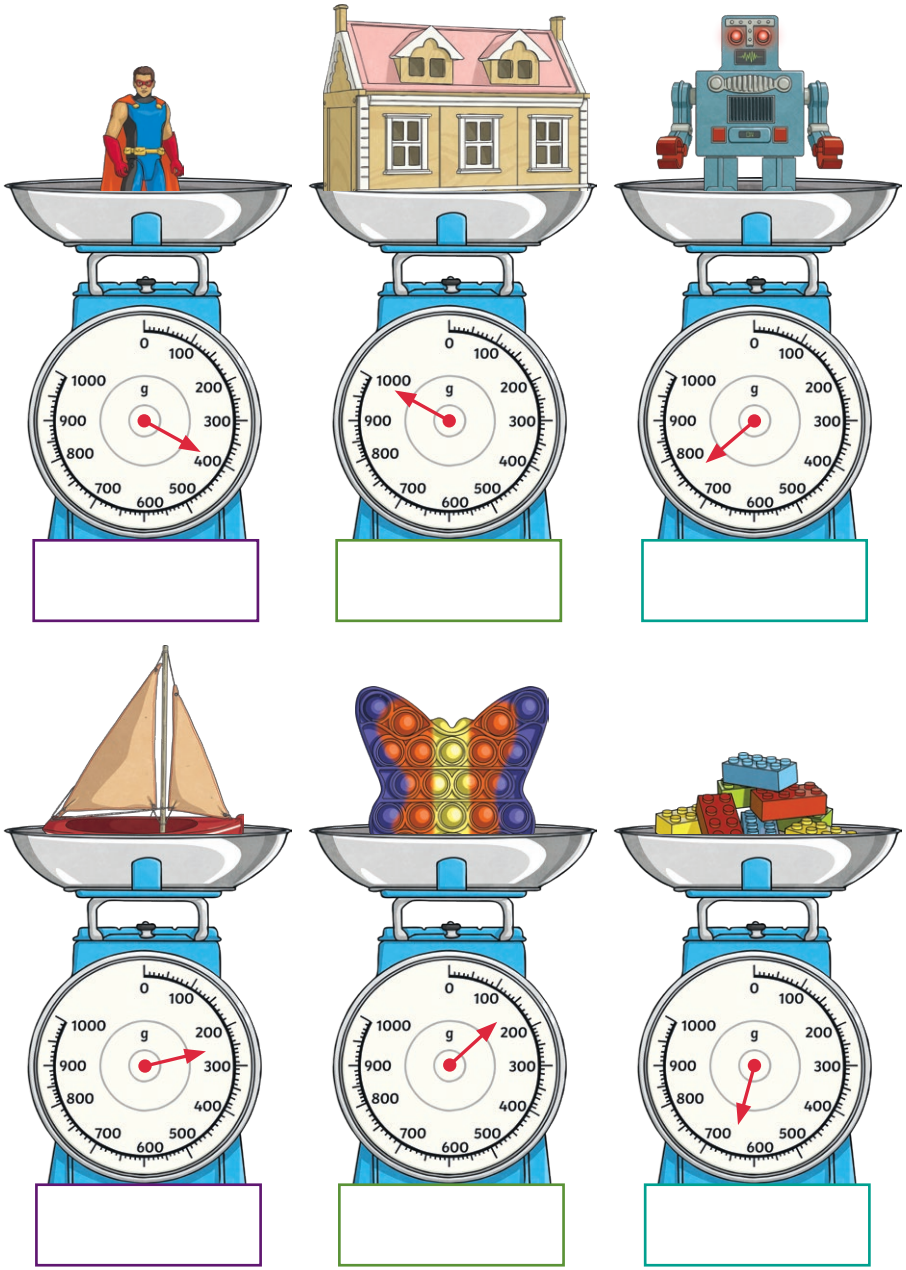


ml

b) How much water is there altogether?

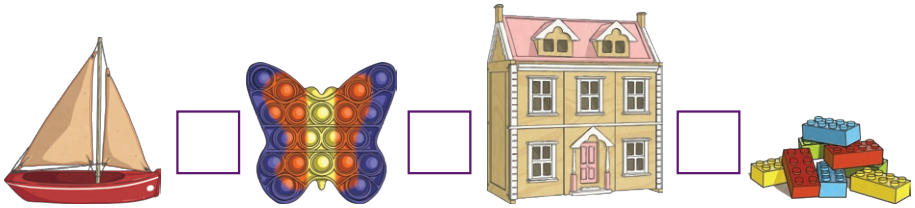
2 marks

5. What is the mass of each toy?



2 marks

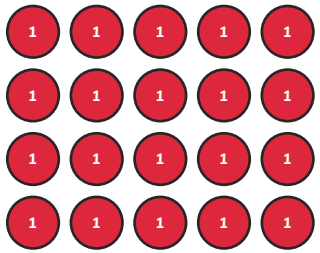
6. Look back at the toy masses in question 5. Compare them using <, > or =.



1 mark

7. a) Identify the multiplication and division facts shown by the arrays.

Array 1



□ × □ = □

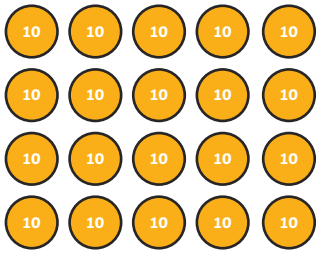
□ × □ = □

□ ÷ □ = □

□ ÷ □ = □

1 mark

Array 2



□ × □ = □

□ × □ = □

□ ÷ □ = □

□ ÷ □ = □

1 mark

b) Find **2 similarities** and **2 differences** between **Array 1** and **Array 2**.

What is the **same**?	What is **different**?

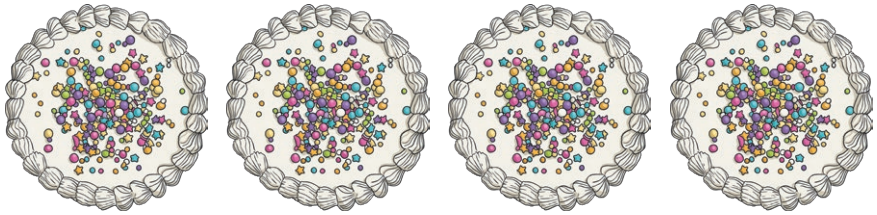
2 marks

8. a) There are 48 children altogether on the playground for PE. They get into groups of 8. How many groups are there? Explain how you know.

b) In the Music Room, the children are in groups of 4. If there are 8 groups, how many children are in the class?

2 marks

9. At a party, there are 4 cakes to share equally between 8 children. How much cake do they each get?



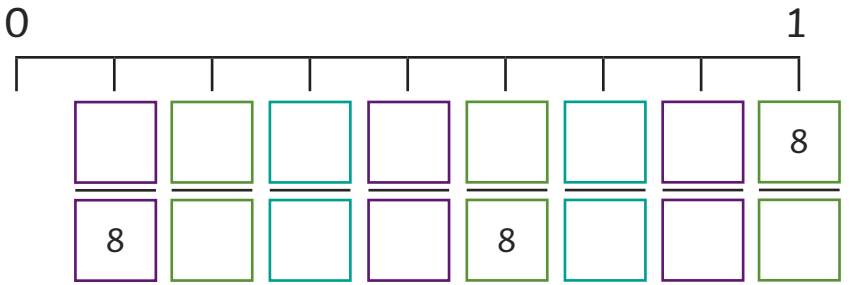
1 mark

10. a) Write these fractions in order from smallest to largest.

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{7}$ $\frac{1}{5}$ $\frac{1}{8}$ $\frac{1}{3}$

smallest → largest

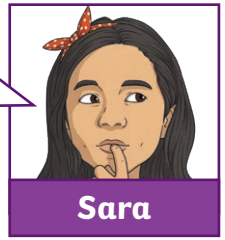
b) Fill in the missing fractions to complete the number line.



2 marks

11. a) Is Sara correct?

Tens	Ones
10	1 1
10	1 1



b) Give a reason for your answer.

2 marks

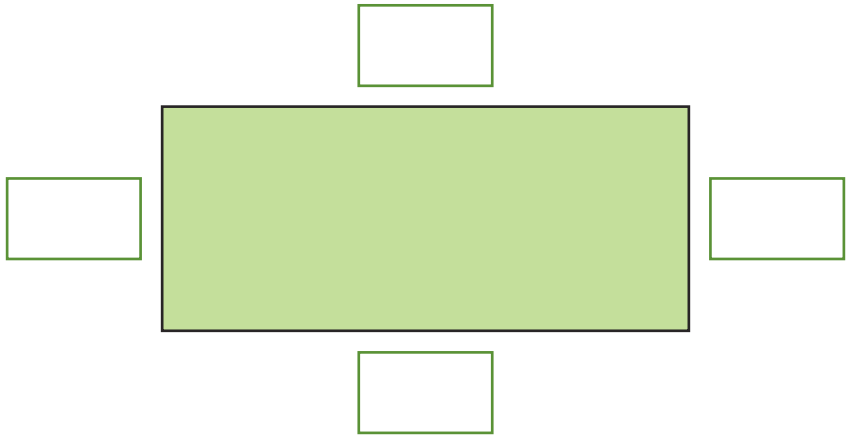
12. a) Circle the **odd** one out.
There are different possible answers.

50 ÷ 5	49 ÷ 6
33 ÷ 4	25 ÷ 3

b) Give a reason why the calculation you have circled in part a) is the **odd** one out.

1 mark

13. a) Use a ruler to measure the sides of this shape in cm.

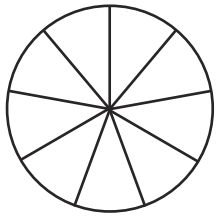


b) Use these measurements to calculate the perimeter of the shape.

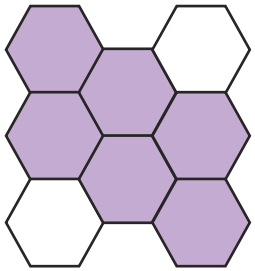
perimeter =

2 marks

14. a) Shade $\frac{7}{9}$ of this shape.



b) How much of this shape is shaded?



2 marks

15. a) Look at each number statement and write **T** if it is **TRUE**, or **F** if it is **FALSE**.

8 × 50 = 400		50 × 400 = 8	
50 ÷ 400 = 8		8 = 400 ÷ 50	
50 = 8 × 400		400 ÷ 8 = 50	

b) Which times table fact helped you work out the answers?

2 marks

16. a) If 8 milkshakes are made with 800ml of milk, how much milk is in **1** milkshake?

b) 1 apple has a mass of 40g. What would the total mass of 5 apples be?

2 marks

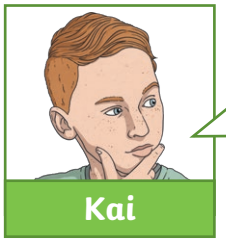
17. a) Charlie has packed 6 T-shirts and 3 pairs of shorts for his holiday. In the table below, fill in all the different combinations of T-shirts and shorts. You may wish to use a code for this, for example, R = red shorts. One has been done for you.

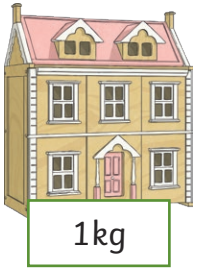
	 Blue	 Red	 Brown
 Yellow		Y and R	
 Green			
 Orange			
 Turquoise			
 White			
 Pink			

b) Write a times table fact to represent the combinations.

3 marks

18. Is Kai correct? Explain your reasoning.





1 mark

19. Compare these measurements and order them from shortest to longest.

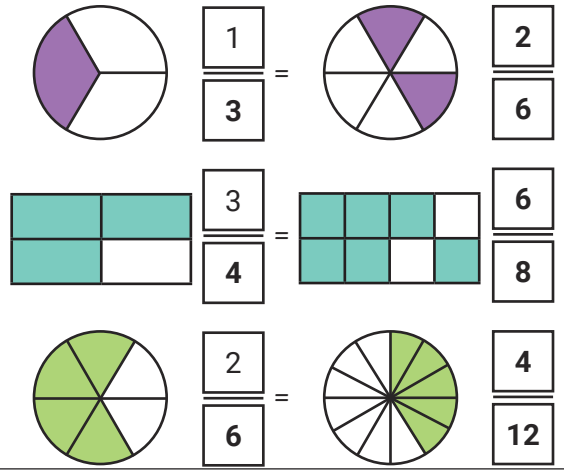
306cm	3m and 60cm	4m	316cm

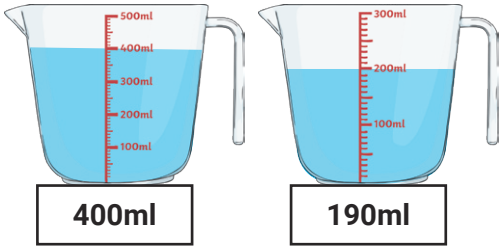
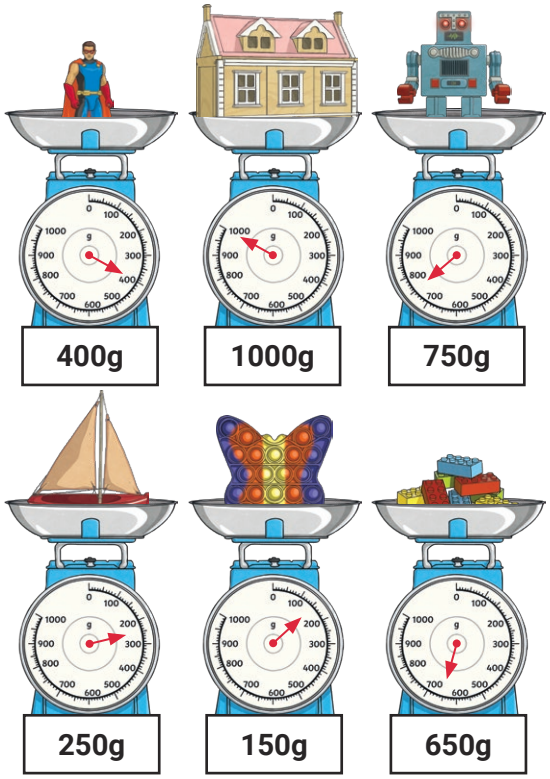
shortest → longest

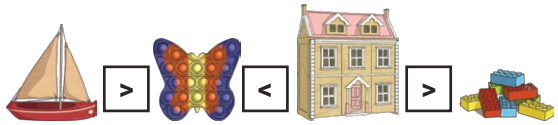
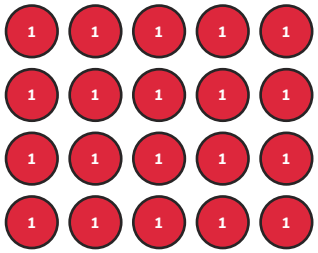
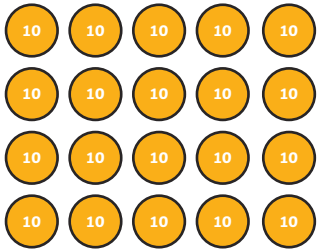
1 mark

Total 36 marks

Mark Scheme

		Answer	Assessment Focus	Possible Misconceptions and Interventions with download links to evidence-based interventions
1.	2 marks a) 1 mark b) 1 mark	**a) 76mm** **b) 76 – 15 = 61mm**	Measure and subtract lengths in mm. (NC: Measurement)	Children may not notice when there are different units of measurement when adding and subtracting units of length. Year 3 Maths Same-Day Intervention Plan: Adding and Subtracting Lengths
2.	1 mark for identifying the correct calculation **and** finding the correct answer.	**3 × 12 = 36 sweets**	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know. (NC: Number – Multiplication and Division)	Children may lack fluency when recalling the 3 times table facts. Year 3 Maths Same-Day Intervention Plan: 3 Times Table
3.	3 marks 1 mark for each correctly completed row.		Recognise and show, using diagrams, equivalent fractions with small denominators. (NC: Number – Fractions)	Children may not understand that equivalent fractions have the same value and may think that because the numerator and denominator are greater, there will be more parts representing a different value. Year 3 Maths Same-Day Intervention Plan: Exploring Equivalent Fractions Using Concrete Resources

		Answer	Assessment Focus	Possible Misconceptions and Interventions with download links to evidence-based interventions
4.	2 marks a) 1 mark for identifying amount of water in each container. b) 1 mark for correct calculation.	**a)**  **b) 400 + 190 = 590ml**	Measure and add volume (ml). (NC: Measurement)	Children may not be able to use the information given to work out the value of unlabelled intervals. Year 3 Maths Same-Day Intervention Plan: Measuring Capacity and Volume Children may not notice when there are different units of measurement when adding and subtracting volume. Year 3 Maths Same-Day Intervention Plan: Adding and Subtracting Capacity and Volume
5.	2 marks 1 mark for three to five correct answers. 2 marks if all six are correct.	 	Measure mass (g). (NC: Measurement)	Children may not be able to use the information given to work out the value of unlabelled intervals. Year 3 Maths Same-Day Intervention Plan: Measuring Mass

		Answer	Assessment Focus	Possible Misconceptions and Interventions with download links to evidence-based interventions
6.	1 mark for all 3 correct answers.		Compare mass (g). (NC: Measurement)	Children may not notice when there are different units of measurement when comparing mass. Year 3 Maths Same-Day Intervention Plan: Comparing and Ordering Mass
7.	4 marks a) 1 mark for 4 correct facts in Array 1. 1 mark for 4 correct facts in Array 2. b) 1 mark for 2 or 3 correct answers. 2 marks for 4 correct answers.	**Array 1**  **4 × 5 = 20** **5 × 4 = 20** **20 ÷ 5 = 4** **20 ÷ 4 = 5** **Array 2**  **40 × 50 = 200** **50 × 40 = 200** **200 ÷ 5 = 40** **200 ÷ 4 = 50**	Use multiplication and division facts to derive related facts. (NC: Number and Place Value – Multiplication and Division: Non-Statutory Guidance)	Children may not be able to apply their place value knowledge to scale multiplicative number facts by 10. Year 3 Maths Same-Day Intervention Plan: Scaling Multiplication Facts by 10

<table>
<tr><th></th><th></th><th>Answer</th><th>Assessment Focus</th><th>Possible Misconceptions and Interventions
with download links to evidence-based interventions</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><th>What is the same?</th><th>What is different?</th></tr>
<tr><td>Number or rows.</td><td>Numbers in Array 2 are ten times the size of the numbers in Array 1.</td></tr>
<tr><td>Number of columns.</td><td>Numbers in Array 1 are ten times smaller than the numbers in Array 2.</td></tr>
<tr><td>Both show 4 facts: 2 multiplication facts and 2 division facts.</td><td>Value of counters. In Array 1, the place value counters are each worth 1/one, whereas in Array 2, the counters are each worth 10.</td></tr>
<tr><td>Both sets of facts include digits: 4, 5 and 2.</td><td>The totals.</td></tr>
<tr><td colspan="2">Accept any other reasonable similarity or difference.</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>8.</td><td>2 marks

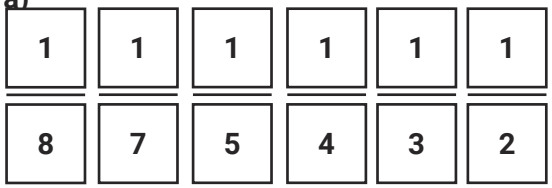
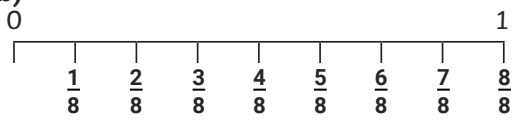
a) 1 mark for correct answer and explanation.

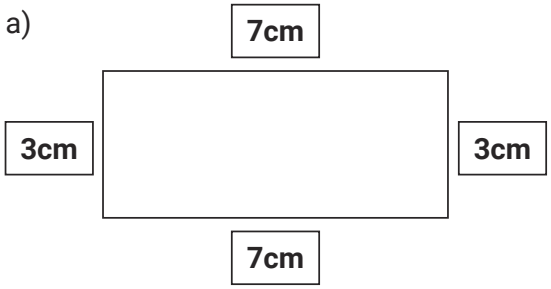
b) 1 mark for correct answer.</td><td>
6 groups

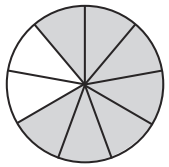
I know there will be 6 groups of 8 because 6 lots of 8 is 48 and 48 ÷ 8 = 6.
<table>
<tr><td>8</td><td>×</td><td>4</td><td>=</td><td>32</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td colspan="5" rowspan="2">32 children</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
</table>
</td><td>Apply known multiplication and division facts to solve contextual problems.

(Ready-to-Progress: 3MD–1)</td><td>Children may use inefficient methods such as counting, and may not be able to interpret the language used in division word problems linked to the use of multiplication tables facts.

Year 3 Same-Day Intervention Plan: Applying Known Facts</td></tr>
</table>

		Answer	Assessment Focus	Possible Misconceptions and Interventions with download links to evidence-based interventions
9.	1 mark for the correct answer, stated in any correct format.	**The each get $\frac{1}{2}$ a cake. This may be shown in any format, e.g. 1 half, one half, $\frac{1}{2}$, or half a cake clearly drawn.**	Pupils understand the relation between unit fractions as operators (fractions of), and division by integers. (NC: Fractions: Non-Statutory Guidance)	
10.	2 marks a) 1 mark for correctly ordering unit fractions. b) 1 mark for accurately completing the number line.	**a)**  **b)**  	Compare and order unit fractions, and fractions with the same denominator. (NC: Number – Fractions)	Children may think $\frac{1}{8}$ is greater than $\frac{1}{4}$ because 8 is greater than 4. Year 3 Maths Same-Day Intervention Plan: Comparing and Ordering Unit Fractions Children may not know that when fractions have the same denominator, the greater the numerator, the greater the fraction and may use inefficient methods to compare fractions. Year 3 Maths Same-Day Intervention Plan: Comparing and Ordering Fractions with the Same Denominator Children may count the intervals rather than the parts when identifying or placing a fraction on a number line. Year 3 Maths Same-Day Intervention Plan: Placing Fractions on a Number Line
11.	2 marks a) 1 mark for stating no. b) 1 mark for a correct explanation.	a) **No** b) **Sara is incorrect because 24 ÷ 3 = 8, not 12. She has made a mistake by only sharing 24 by 2 (she only has two rows in her table). Sara needs to have a third row in her table to share the 24 counters equally between 3.**	Write and calculate mathematical statements for division, using mental and progressing to formal written methods. (NC: Number and Place Value – Multiplication and Division)	Children may incorrectly interpret the answer from partitioning. Year 3 Maths Same-Day Intervention: Dividing using Partitioning with no Remainder

		Answer	Assessment Focus	Possible Misconceptions and Interventions with download links to evidence-based interventions
12.	1 mark for explanation.	a) **50 ÷ 5** (circled) 49 ÷ 6 33 ÷ 4 25 ÷ 3 b) **Please accept any plausible explanation for the circled calculation in part a). E.g. 50 ÷ 5 is the odd one out because it is the only division calculation that is <u>exactly</u> divisible by its divisor. All other calculations have <u>remainders</u>.**	Calculate mathematical statements for division. (NC: Number – Multiplication and Division)	Children may not interpret the answer correctly or give an answer which is one group short. Year 3 Maths Same-Day Intervention - Dividing using Partitioning with Remainders
13.	2 marks a) 1 mark if all the lengths are measured correctly. b) 1 mark for correct answer.	a)  b) **7 + 7 + 3 + 3 = 20** perimeter = **20cm**	Measure the perimeter of simple 2D shapes. (NC: Measurement)	Children may not notice when there are different units of measurement when adding and subtracting units of length. Year 3 Maths Same-Day Intervention Plan: Adding and Subtracting Lengths Children may not understand how to calculate the perimeter of a square or rectangle. Year 3 Maths Same-Day Intervention Plan: Measuring the Perimeter of a Square or Rectangle

		Answer	Assessment Focus	Possible Misconceptions and Interventions with download links to evidence-based interventions
14.	2 marks a) 1 mark for correct answer. b) 1 mark for correct answer.	a)  b) $\frac{6}{8}$ **Pupils may also provide the equivalent fraction, $\frac{3}{4}$.**	Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. (NC: Number – Fractions)	Children may mistake 2 parts shaded out of 6 as $\frac{2}{4}$. Year 3 Maths Same-Day Intervention Plan: Recognising and Representing Non-Unit Fractions
15.	2 marks a)1 mark for 4 or more correct statements. b)1 mark for a correct table fact.	a) 8 × 50 = 400 **T** 50 × 400 = 8 **F** 50 ÷ 400 = 8 **F** 8 = 400 ÷ 50 **T** 50 = 8 × 400 **F** 400 ÷ 8 = 50 **T** b) **8 × 5 = 40 or 5 × 8 = 40**	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). (Ready-to-Progress: 3NF–3)	Children may not be able to apply their place value knowledge to scale multiplicative number facts by 10. Year 3 Maths Same-Day Intervention Plan: Scaling Multiplication Facts by 10 Children may not be able to apply the laws to tackle more challenging mental calculations efficiently. Year 3 Maths Same-Day Intervention Plan: Using Commutativity and Associativity
16.	2 marks a) 1 mark for correct answer. b) 1 mark for correct answer.	a) **800 ÷ 8 = 100** **100ml** b) |				| |---|---|---|---|---| |	**4**	**0**		| | **×**		**5**		| | **2**	**0**	**0**		| |				| |			**200g**	| **Children may use repeated addition to find this answer.** **40 + 40 + 40 + 40 + 40 = 200g**	Solve problems, involving multiplication and division. (NC: Number and Place Value – Multiplication and Division)	Children may use inefficient methods such as counting, and may not be able to interpret the language used in division word problems linked to the use of multiplication tables facts. Year 3 Maths Same-Day Intervention: Applying Known Facts

<table>
<tr><th></th><th></th><th>Answer</th><th>Assessment Focus</th><th>Possible Misconceptions and Interventions
with download links to evidence-based interventions</th></tr>
<tr><td>17.</td><td>3 marks

1 mark for six to eleven correct combinations

OR

2 marks for all combinations correct on grid.

1 mark for correct calculation.</td><td>
<table>
<tr><th></th><th>Blue</th><th>Red</th><th>Brown</th></tr>
<tr><td>Yellow</td><td>Y and B</td><td>Y and R</td><td>Y and Br</td></tr>
<tr><td>Green</td><td>G and B</td><td>G and R</td><td>G and Br</td></tr>
<tr><td>Orange</td><td>O and B</td><td>O and R</td><td>O and Br</td></tr>
<tr><td>Turquoise</td><td>T and B</td><td>T and R</td><td>T and Br</td></tr>
<tr><td>White</td><td>W and B</td><td>W and R</td><td>W and Br</td></tr>
<tr><td>Pink</td><td>P and B</td><td>P and R</td><td>P and Br</td></tr>
</table>
6 × 3 = 18 or 3 × 6 = 18
</td><td>Solve problems, involving multiplication correspondence problems in which n objects are connected to m objects.

(NC: Number and Place Value – Multiplication and Division)</td><td></td></tr>
<tr><td>18.</td><td>1 mark for correct explanation.</td><td>Kai is incorrect. 1000g is equivalent (equal) to 1kg. This means both toys have the same mass.</td><td>Compare mass (kg/g).

(NC: Measurement)</td><td>Children may not know how to use the fact that 1000g is equal to 1kg.

Year 3 Maths Same-Day Intervention Plan: Adding and Subtracting Mass</td></tr>
<tr><td>19.</td><td>1 mark for correct answer.</td><td>shortest → longest
306cm | 316cm | 3m and 60cm | 4m</td><td>Compare lengths (m/cm).

(NC: Measurement)</td><td>Children may not notice when there are different units of measurement when comparing lengths.

Year 3 Maths Same-Day Intervention Plan: Comparing and Ordering Lengths</td></tr>
</table>