Year group:	1			

Year group:	1
Type of test:	End of Half Term
Term:	Spring 2
Test content:	Reasoning
Power Maths topic:	Book 1B, Units 6–10

Q	ANSWER	MARK	INCORRECT ANSWERS AND MISCONCEPTIONS	EVIDENCE OF GREATER DEPTH
1	**20**	1	**Possible incorrect answer 10 (An answer like this may suggest children just count the pairs)** This topic is covered in Unit 7, Lesson 4.	
2	**11, 15, 19**	1	**Possible incorrect answer numbers in any order (An answer like this may suggest children have not grasped the symbols < and >)** This topic is covered in Unit 6, Lesson 11.	Children can say whether any number up to 20 is less than or greater than another number.
3	**7**	1	**Possible incorrect answer 5 (An answer like this may suggest children have calculated 17 – 4 and given this as their answer)** This topic is covered in Unit 7, Lesson 10.	Children can check a number of subtractions.
4	**Taller**	1	**Possible incorrect answer shorter (An answer like this may suggest children do not understand the meaning of the words taller and shorter)** This topic is covered in Unit 9, Lesson 1.	Children can compare and order two or more objects based on their height or length.
5	**9**	1	**Possible incorrect answers 8 or 10 (An answer like this may suggest children have miscounted when counting on from 5 cm on the ruler)** Children may not count single jumps on a ruler as they would on a number line and they may not start at 0 cm. This topic is covered in Unit 9, Lesson 3.	Children can identify the importance of having standard units of measurement. Children can measure length accurately in centimetres using a ruler.

Q	ANSWER	MARK	INCORRECT ANSWERS AND MISCONCEPTIONS	EVIDENCE OF GREATER DEPTH
6	**4** **50**	1 1	**Possible incorrect answer 8 for the first diagram, 34 for the second diagram (An answer like this may suggest children are unsure about the concept of part-whole diagrams)** Children may calculate every number sentence to work out the answer. This topic is covered in Unit 7, Lesson 10.	Children can fluently derive different addition and subtraction number sentences from the same part-whole model. When they have found all possible number sentences, they can use the patterns they have spotted to begin creating generalisations that justify their solutions. For example: **part** + part = whole part + **part** = whole whole = **part** + part whole = part + **part** whole - **part** = part whole - part = **part** **part** = whole – part part = whole - **part**
7	**2 D** **3 B** **4 A**	1	**Possible incorrect answer other combinations (An answer like this may suggest children do not understand the concept of capacity)** When comparing the capacity of several containers, children may find it difficult to understand that the unit of measure is a single cup, not a numerical measurement. This topic is covered in Unit 10, Lesson 6.	Children can compare and order sets of containers according to their capacities, measured using a variety of non-standard units.
8	**28, 31, 32** All 3 numbers needed for 1 mark	1	**Possible incorrect answer 30, 31, 32 (An answer like this may suggest children are unsure about counting forwards or backwards)** Children's understanding of place value may limit their ability to complete the sequence correctly. For example, they may add or subtract 1, but mistakenly change the tens digit or, alternatively, both the tens and ones digits. This topic is covered in Unit 8, Lessons 1 and 2.	Children can find one more or one less than any number up to 50, using a number line and base 10 equipment to help as needed.

Q	ANSWER	MARK	INCORRECT ANSWERS AND MISCONCEPTIONS	EVIDENCE OF GREATER DEPTH
9	**2**	1	**Possible incorrect answers 4 or 6 (An answer like this may suggest children have counted the ducks on the left or right side or the total number of ducks)** Children may find it difficult to decide which operation to use to solve a word problem. This topic is covered in Unit 10, Lesson 7.	Children can use mathematical reasoning, addition and subtraction, and their understanding of weight and capacity to solve a variety of word problems.
10	**6** 1 mark for appropriate method, such as: 21 – 6 – 9 6 + 9 = 15 and 21 – 15 = 6 21 – 6 = 15 and 15 – 9 = 6 21 – 9 = 12 and 12 – 6 = 6	2	**Possible incorrect answer 36 (An answer like this may suggest children have added instead of subtracting)** **Possible incorrect answers 7 or 8 (An answer like this may suggest children have included 21 (or 15 or 12) when counting down)** Children may incorrectly identify the operation in the number sentence related to the word problem. This topic is covered in Unit 7, Lesson 11.	Children can identify which operations are required to solve a contextualised problem.

Mark range	Level
0 – 3	Below
4 – 5	Towards
6 – 7	Expected
8 – 9	Secure
10	Towards greater depth
11 – 12	Greater depth