Year group:	1
Type of test:	End of Year
Term:	Year 1
Test content:	Arithmetic
Power Maths topic:	Books 1A, 1B, 1C

Q	ANSWER	MARK	INCORRECT ANSWERS AND MISCONCEPTIONS	EVIDENCE OF GREATER DEPTH
1	**8**	1	**Possible incorrect answer 4 (An answer like this may suggest children have subtracted instead of adding)** Children may not apply number facts and therefore resort to a 'Count all' or 'Count' strategy. This topic is covered in Unit 1, Lesson 2.	
2	**17**	1	**Possible incorrect answer 9 (An answer like this may suggest children have subtracted instead of adding)** This topic is covered in Unit 7, Lesson 1.	
3	**20**	1	**Possible incorrect answer 10 (An answer like this may suggest children have subtracted instead of adding)** This topic is covered in Unit 7, Lesson 1.	

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4	**5**	1	**Possible incorrect answer 11 (An answer like this may suggest children have added instead of subtracting)** Children may incorrectly count back when using a number line so that the starting number is counted as one jump. This topic is covered in Unit 4, Lesson 1.	Children can solve subtractions within 10 by crossing out or physically removing objects and counting how many are left. Children can use contexts to explain their answers and differentiate between the total number to begin with, the number taken away and the number left.
5	**10**	1	**Possible incorrect answer 14 (An answer like this may suggest children have added instead of subtracting)** Children may not make links with prior mathematical knowledge to help them solve calculations, such as not spotting that 5 – 2 will help with 15 – 2. This topic is covered in Unit 8, Lesson 1.	Children can use efficient strategies to subtract ones. Children can use their knowledge of number bonds within 20 to work out calculations mentally, and to make connections between number sentences such as 16 – 4 and 6 – 4.
6	**7**	1	**Possible incorrect answer 23 (An answer like this may suggest children have added instead of subtracting)** Children may not successfully use a split strategy to cross the 10s barrier. This topic is covered in Unit 8, Lesson 1.	Children can use efficient strategies to subtract ones. Children can use their knowledge of number bonds within 20 to work out calculations mentally.
7	**5**	1	**Possible incorrect answer 17 (An answer like this may suggest children have misunderstood counting up from one number to another and added 6 to 11)** Children may not apply number facts and therefore resort to a 'Count all' or 'Count' strategy. This topic is covered in Unit 7, Lesson 5.	Children can correctly identify the different parts of a part-whole model and relate them to different pictorial representations or structures. Children understand that the same whole can be made up of different parts.
8	**2**	1	**Possible incorrect answer 26 (An answer like this may suggest children have misunderstood counting up from one number to another)** Children may struggle with the transition from a 'count all' to a 'count on' strategy. This topic is covered in Unit 7, Lesson 5.	Children can correctly identify the different parts of a part-whole model and relate them to different pictorial representations or structures. Children understand that the same whole can be made up of different parts.

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9	**2**	1	**Possible incorrect answer 20 (An answer like this may suggest children have added instead of subtracting)** Children may incorrectly count back when using a number line so that the starting number is counted as one jump. This topic is covered in Unit 4, Lesson 1.	Children can solve subtractions within 20 in different contexts. Children can represent subtraction using different models, such as a ten frame or part-whole model, and differentiate between the number left and the number taken away.
10	**12**	1	**Possible incorrect answer 4 (An answer like this may suggest children have subtracted 4 from 8 instead)** Children may not understand that subtraction is not commutative and may switch numbers around in a subtraction number sentence. This topic is covered in Unit 4, Lesson 2.	Children can solve subtractions within 20 in different contexts. Children can represent subtraction using different models, such as a ten frame or part-whole model, and differentiate between the number left and the number taken away.
11	**20**	1	**Possible incorrect answer 15 or 25 (An answer like this may suggest children have counted one too few or one too many 5s)** Children may count inaccurately when counting in one or more steps of 10, 5 or 2, and may keep counting beyond where they need to count to. This topic is covered in Unit 12, Lesson 1.	
12	**3**	1	**Possible incorrect answer 10 (An answer like this may suggest children have subtracted instead of dividing)** Children who struggle to read or understand the written vocabulary may misunderstand the problem and therefore muddle their working out. This topic is covered in Unit 13, Lessons 3 and 4.	Children who demonstrate mastery of this concept will be able to share larger numbers between 5. They will also recognise that 15 shared between 3 is 5.

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13	**14**	1	**Possible incorrect answer 9 (An answer like this may suggest children have added 7 and 2)** **Possible incorrect answer 77 (An answer like this may suggest children have simply written two 7s)** Children may not be able to translate the problem into an addition. This topic is covered in Unit 12, Lesson 5.	Children can find the double of a given number and explain what doubles are, using the appropriate vocabulary. They can use representations to show doubles concretely and pictorially, and use repeated addition calculations to represent doubles in an abstract manner.
14	**3**	1	**Possible incorrect answer 12 (An answer like this may suggest children have doubled 6 instead of halving it)** Children may not understand the concept of equal parts. This topic is covered in Unit 14, Lesson 2.	Children can confidently find half of shapes and objects. Children can explain their method of finding half.
15	**29**	1	**Possible incorrect answer 38 (An answer like this may suggest children have confused the tens and ones)** Children may not realise the place value of each digit in a number. For example, they may think of the number 34 as 3 and 4 rather than 3 tens (30) and 4 ones (4). This topic is covered in Unit 9, Lesson 3.	Children can express a number up to 50 as tens and ones (for example, they know that 43 is made up of 4 tens and 3 ones). Children can demonstrate this using a range of different representations.
16	**30**	1	**Possible incorrect answer 21 (An answer like this may suggest children have confused the tens and ones)** Children may not realise the place value of each digit in a number. For example, they may think of the number 34 as 3 and 4 rather than 3 tens (30) and 4 ones (4). This topic is covered in Unit 9, Lesson 3.	Children can express a number up to 50 as tens and ones (for example, they know that 43 is made up of 4 tens and 3 ones). Children can demonstrate this using a range of different representations.
17	**3**	1	**Possible incorrect answer 6 or 12 (An answer like this may suggest children have subtracted 3 from 9 or added 9 and 3)** Children may not understand the concept of sharing. This topic is covered in Unit 13, Lessons 3 and 4.	

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18	**37**	1	**Possible incorrect answer 73 (An answer like this may suggest children have confused the tens and ones)** Children may miss out numbers when counting forwards. This topic is covered in Unit 9, Lesson 2.	Children can accurately count backwards and forwards to 50 in 1s. Children can identify missing numbers in a sequence by counting forwards or backwards in 1s from the numbers in the sequence that are known.
19	**8 12**	1	**Possible incorrect answer 7, 11 (An answer like this may suggest children have not understood counting up in 2s)** Children may give numbers that do not fit the pattern when counting in 2s or 5s (for example, saying 13 when counting from 0 in 2s). This topic is covered in Unit 9, Lesson 8.	Children can count in 2s from an even starting point. Children realise that all numbers when counting in 2s from an even starting point end in 0, 2, 4, 6 or 8.
20	**1**	1	**Possible incorrect answer 2 (An answer like this may suggest that children may not recognise it is a two-step problem)** Children may struggle to recognise how to solve a calculation when there are operations on both sides of the equals sign. This topic is covered in Unit 7, Lessons 1 and 2 and Unit 8, Lesson 2.	Children can read different contexts and problems, identifying the numbers with which they need to work (including the whole, parts and the whole or part that is unknown) and the operations to be used.
21	**2**	1	**Possible incorrect answer 11 (An answer like this may suggest that children may not recognise it as a two-step problem)** **Possible incorrect answer 24 (An answer like this may suggest that children may have added all the numbers)** Children may struggle to recognise how to solve a calculation when there are operations on both sides of the equals sign. This topic is covered in Unit 7, Lessons 1 and 2 and Unit 8, Lesson 2.	Children can read different contexts and problems, identifying the numbers with which they need to work (including the whole, parts and the whole or part that is unknown) and the operations to be used.

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22	**9**	1	**Possible incorrect answer 7 (An answer like this may suggest children have misinterpreted the question and gone back one hour)** Children may be confused by the variety of representations of time, including 'time as a duration', 'clock time', and 'calculating with time'. This topic is covered in Unit 17, Lesson 1.	Children can use a range of language, especially 'before' and 'after', but also 'yesterday', 'today', 'tomorrow' and the days of the week, to describe the order of a series of events, including events in their own daily routine. Children can make sensible suggestions about things that might have happened before or after a given event.
23	**10**	1	**Possible incorrect answer 10:30 or half past 10 (An answer like this may suggest children have misinterpreted the question and gone forward one hour)** Some children may be less familiar with the idea of 'half past the hour'. This topic is covered in Unit 17, Lesson 7.	Children can solve simple word problems by finding the sum total of or difference between two time intervals; they can find the amount of time remaining for a task of fixed duration, or calculate the (clock) time at some period in the future. Children can relate addition and subtraction to the ideas of 'later' and 'earlier'.
24	**27**	1	**Possible incorrect answer 45 (An answer like this may suggest children have confused the tens and ones)** Children may not realise the place value of each digit in a number. For example, they may think of the number 34 as 3 and 4 rather than 3 tens (30) and 4 ones (4). This topic is covered in Unit 9, Lesson 3.	Children can express a number up to 50 as tens and ones (for example, they know that 43 is made up of 4 tens and 3 ones). Children can demonstrate this using a range of different representations.

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25	**33**	1	**Possible incorrect answer 6 (An answer like this may suggest children have confused the tens and ones and have just deleted the 3 from 36)** Children may not realise the place value of each digit in a number. For example, they may think of the number 34 as 3 and 4 rather than 3 tens (30) and 4 ones (4). This topic is covered in Unit 9, Lesson 3.	Children can express a number up to 50 as tens and ones (for example, they know that 43 is made up of 4 tens and 3 ones). Children can demonstrate this using a range of different representations.

Mark range	Level
0 – 6	Below
7 – 11	Towards
12 – 17	Expected
18 – 20	Secure
21 – 23	Towards greater depth
24 – 25	Greater depth