

Year 5 Spring 1 Problem solving and reasoning

Marking guidance

↓ NC objective in a year below ↑ NC objective in a year above * Key question

Qu.	National curriculum objectives	Progression map outcome	Answers	Marks	Possible errors	Advice
1*	Y5.NPV.1 Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit	NPV a) Read and write numbers to at least 1 000 000. b) Order and compare numbers to at least 1 000 000.	a) Various answers, e.g. 913 117, 913 217 b) Various answers (check order is smallest to largest), e.g. 120 699 < 120 796 < 120 829	2	a) Most children position the 1s, 10s and 1000s digits correctly. It is the 9 hundred thousand that causes the difficulty. b) Children can get confused when three numbers are involved in an inequality statement.	a) Check children's understanding of the higher place values and practise reading and writing large numbers regularly. b) Advise children to consider the first two numbers and then the last two numbers whole statement is true. A final check can make children realise they need to change some digits in the second number, so neglecting this stage can result in an overall wrong answer.

2*	Y5.NMD.7 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	MD Multiply and divide numbers by 10 and 100, including decimal numbers and those leading to decimal answers.	a) 28 060 b) 9100	2	a) The '0' tens digit in 2806 is difficult for some children when multiplying by 10, causing errors such as 2860 and 28 006. b) 0·91, 900 and 910 are possible errors, probably because children do not understand that they need to use the inverse operation to find the answer.	a) Use a place-value grid to remind children how to multiply by 10. What is happening to each digit? Discuss when '0' is used as a place holder. b) Encourage children to use a place-value grid to provide visual support. Discuss how to use the inverse operation to find the solution.
3*	Y5.NF8 Round decimals with two decimal places to the nearest whole number and to one decimal place	Part a) of this question consolidates learning and links to the following outcome in the Autumn term: FDRP a) Read, write, order and compare numbers with up to 2 decimal places. FDRP b) Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place.	a) Check – should be exact and clearly marked b) 17, 9	2	a) If children mark 8·05 at 8·5 and / or 8·79 at 8·7 or 8·8, this indicates a misunderstanding of 2-decimal place numbers. b) Errors of 17·50 and 9·1, respectively, show children are rounding to the nearest tenth, ignoring the question. Others may round up to 18 and 10.	Practise reading and writing 2-digit decimal numbers, checking children know the value of each of the number's digits. Make sure children are reading decimal numbers correctly, i.e. 'eight point zero five' and 'eight point seven nine' not 'eight point five' and 'eight point seventy-nine'.