Phase 7 Multiples, Factors, Primes and Patterns Assessment

Phase 7 Progression Overview	Assessment Note	Marks
I can identify multiples and factors of whole numbers and apply knowledge and understanding of these when solving relevant problems in number, money and measurement.	Question 1	/6
I can explain and use a rule to extend well known number sequences including square numbers, triangular numbers and Fibonacci sequence.	Question 2	/9
I can apply knowledge of multiples, square numbers and triangular numbers to generate number patterns.	Question 3	/6
	TOTAL MARKS	**/21**

	Question	Mark
1	**I can identify multiples and factors of whole numbers and apply knowledge and understanding of these when solving relevant problems in number, money and measurement.** a.) A school is organising teams for a maths challenge. 48 pupils are taking part. They want to create equal-sized teams with no one left out. i.) List all the factors of 48. ii.) From your list, choose three possible team sizes they could use iii.) Which team size do you think is *most sensible*? Explain your reasoning. b.) A shop sells notebooks for £3 each. A class wants to buy notebooks for their project. They have a budget of £50. i.) Is £50 a multiple of £3? Show how you know. ii.) How many notebooks can they buy with £50? iii.) How much change will they have?	6
2	I can explain and use a rule to extend well known number sequences including square numbers, triangular numbers and Fibonacci sequence. a.) A learner is given three different sequences. For each sequence: 1. Name the type of sequence. *(square, triangular or Fabonacci)* 2. Explain the rule in your own words. 3. Find the next two terms. *(3 points for each sequence)* i.) Sequence A 1, 3, 6, 10, 15, …	

	ii.) Sequence B 5, 8, 13, 21, 34, … iii.) Sequence C 4, 9, 16, 25, 36, …	9
3	I can apply knowledge of multiples, square numbers and triangular numbers to generate number patterns. a.) Your school is planning three different events. Each event follows a different number pattern to work out how many items are needed. For each event: 1. Identify the type of number pattern (multiples, square numbers, or triangular numbers). 2. Explain the rule in words. 3. Calculate the next two numbers needed. <u>i.) Event A – Prize Bags for Sports Day</u> Each round, the number of prize bags needed is a multiple of 6. Round numbers: 6, 12, 18, 24, 30, … ➤ What type of pattern is this? ➤ What is the rule? ➤ How many prize bags will be needed for the next two rounds? <u>ii.) Event B – Garden Display Squares</u> The gardening club is planting flowers in square arrangements. Flowers planted: 1, 4, 9, 16, 25, … ➤ What type of pattern is this? ➤ What is the rule? ➤ How many flowers will be planted in the next two displays?	6