

Y7 – Autumn – Block 1 – Step 5 – Continue linear sequences Answers

Question	Answer
1	a) 162, 189, 216 b) 1300, 1500, 1700 c) 1, 1.2, 1.4 d) 2.2, 1.86, 1.52 e) 4, 0, -4
2	a) 538, 565, 592, 619, 646 b) 44, 63, 82, 101, 120 c) Yes, there could be 2 sequences in each case. This is because we are told the constant difference, but not whether the sequence is ascending or descending.
3	a) 3000, 3250, 3500, 3750, 4000 b) 3000, 2750, 2500, 2250, 2000 In each case there is only one possible answer as we are given the constant difference and told whether the sequence is ascending or descending.
4	a) 100, 99, 98, 97, 96 b) 10, 9.9, 9.8, 9.7, 9.6 c) Each term in part a) is 10 times bigger than the corresponding term in part b).
5	a) You can only create one sequence as you have to subtract 7 each time. b) You can create 2 linear sequences as you could add 7 each time, or subtract 7 each time. c) You can create an infinite number of linear sequences starting with 59 as you can choose from an infinite number of constant differences. d) You need at least 2 terms to continue a linear sequence (if you are told it is linear).
6	$100 - 28 = 72$
7	a) 1.6, 2.1, 2.6, 3.1, 3.6, 4.1, 4.6, 5.1 b) There is always a 1 or a 6 in the tenths column. It is not possible to have an integer in this sequence as you would need to add either 0.4 or 0.9. Since the constant difference is 0.5 this is impossible
8	There are lots of possible answers, here are 2 examples: 3.0, 3.5, 4.0, 4.5, 5.0, 5.5 10.9, 10.4, 9.9, 9.4, 8.9, 8.4