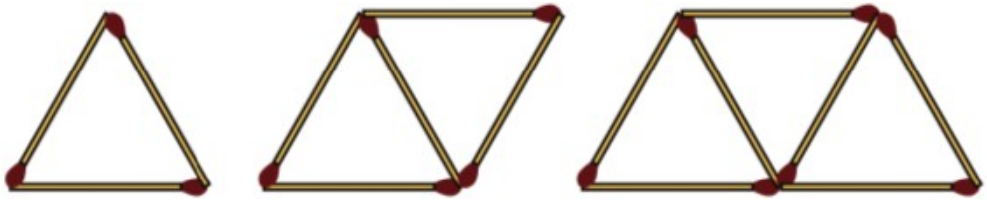
WANDOOR GANITHAM – S.S.L.C STUDY MATERIAL 2021

FOCUS AREA - QUESTION BANK - ARITHMETIC SEQUENCES

1 *Let's make the figures shown in the figure using matchsticks .*

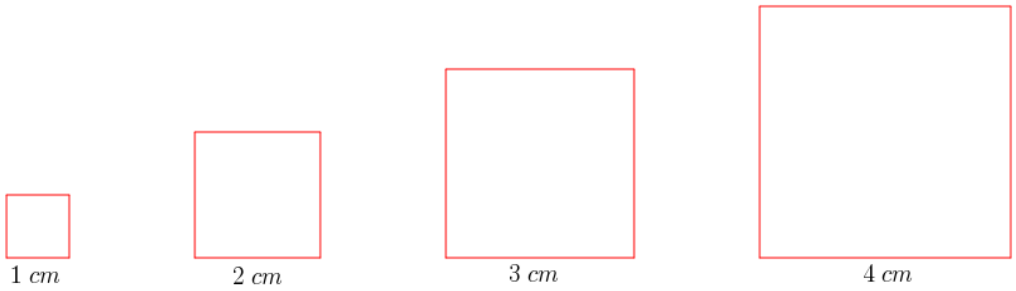


a) *If we continue this process , how many matchsticks are there in the fifth figure*?

b) *If we continue this process , what is the sequence of numbers of matchsticks used in each figure ?*

c) *Check whether the sequence obtained above is an arithmetic sequence or not ?*

2 *In the figure some squares are drawn . Length of the sides of them are also shown in the figure .*

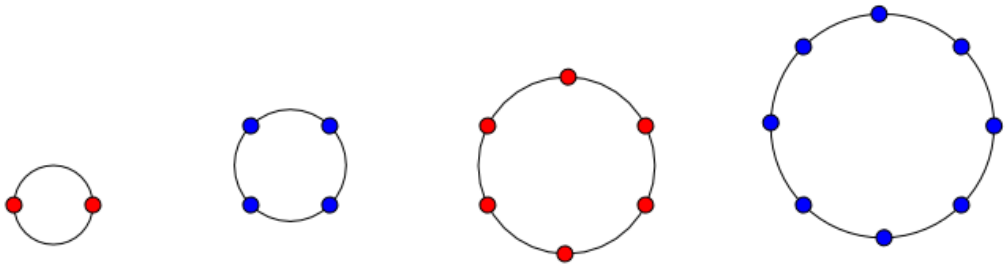


a) *If we continue this process ,what will be the perimeter of the fifth square ?*

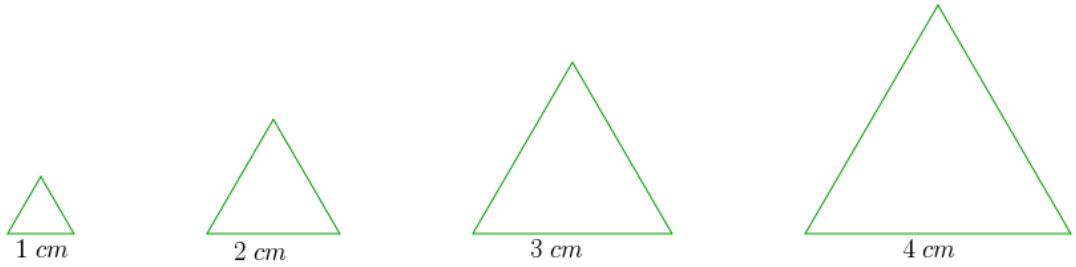
b) *If we continue this process , what is the sequence of the perimeter of the squares ?*

c) *Check whether the sequence obtained above is an arithmetic sequence or not ?*

3 *In the figure some dots are marked on the circles*



a) *If we continue this process , how many dots are there in the fifth circle ?*

	b) ***If we continue this process , what is the sequence of the dots in in each circle ?*** **c)** ***Check whether the sequence obtained above is an arithmetic sequence or not ?***
4	***In the figure some equilateral triangles are drawn . Length of the sides of them are also shown in the figure .*** **a)** ***If we continue this process ,what will be the perimeter of the fifth triangle ?***  **b)** ***If we continue this process , what is the sequence of the perimeter of the triangles ?*** **c)** ***Check whether the sequence obtained above is an arithmetic sequence or not ?***
5	**a)** ***Write the sequence of natural numbers which are multiplied by 3 ?*** **b)** ***Write the sequence of natural numbers which are multiplied by 3 and added to 1 ?*** **c)** ***Check whether the sequence obtained above is an arithmetic sequence or not ?***
6	**a)** ***Write the sequence of natural numbers which are multiplied by 5 ?*** **b)** ***Write the sequence of natural numbers which are multiplied by 5 and subtract 2 from them ?*** **c)** ***Check whether the sequence obtained above is an arithmetic sequence or not ?***
7	**a)** ***Write down the sequence of natural numbers ending in 1 ?*** **b)** ***Check whether the sequence obtained above is an arithmetic sequence or not ?***
8	**a)** ***Write down the sequence of natural numbers ending in 2 or 7 ?*** **b)** ***Check whether the sequence obtained above is an arithmetic sequence or not ?***
9	**a)** ***Write an arithmetic sequence of first term 7 and common difference 4 ?*** **b)** ***What is its 11 th term ?*** **c)** ***Can the difference between any two terms of this sequence be 100 ? Why ?***
10	**a)** ***Write an arithmetic sequence of first term 10 and common difference 6 ?***

	b) ***What is its 8^{th} term*** **?** **c)** ***Can the difference between any two terms of this sequence be*** **54** ***? Why ?***
11	**a)** ***Write an arithmetic sequence of common difference*** **5** **?** **b)** ***What is its 9^{th} term*** **?** **c)** ***Can the difference between any two terms of this sequence be*** **72** ***? Why ?***
12	**a)** ***Write an arithmetic sequence of common difference*** **10** **?** **b)** ***What is its 10^{th} term*** **?** **c)** ***Can the difference between any two terms of this sequence be*** **63** ***? Why ?***
13	***Consider the arithmetic sequence*** **5 , 8 , 11 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its 11^{th} term*** **?** **c)** ***What is the remainder when each term of this sequence is divided by the common difference*** **?** **d)** ***What is its algebraic form*** **?**
14	***Consider the arithmetic sequence*** **6 , 10 , 14 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its 15^{th} term*** **?** **c)** ***What is the remainder when each term of this sequence is divided by the common difference*** **?** **d)** ***What is its algebraic form*** **?**
15	***Consider the arithmetic sequence*** **3 , 10 , 17 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its 20^{th} term*** **?** **c)** ***What is its algebraic form*** **?**
16	***Consider the arithmetic sequence*** **1 , 6 , 11 , ...**

	a) ***What is its common difference*** **?** **b)** ***What is its*** 18^{th} ***term*** **?** **c)** ***What is its algebraic form*** **?**
17	***The algebraic form of an arithmetic sequence is*** **3 n + 2** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***What is the remainder when each term of this sequence is divided by*** **3 ?**
18	***The algebraic form of an arithmetic sequence is*** **5 n + 3** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***What is the remainder when each term of this sequence is divided by*** **5 ?**
19	***The algebraic form of an arithmetic sequence is*** **4 n - 1** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***What is the remainder when each term of this sequence is divided by*** **4 ?**
20	***The algebraic form of an arithmetic sequence is*** **2n - 1** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***What is the remainder when each term of this sequence is divided by*** **2 ?**
21	***Consider the arithmetic sequence*** **5 , 9 , 13 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **101** ***in this sequence ?***
22	***Consider the arithmetic sequence*** **8 , 13 , 18 , ...**

	a) ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **203** ***in this sequence*** **?**
23	***Consider the arithmetic sequence*** **4 , 10 , 16 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **58** ***in this sequence*** **?**
24	***Consider the arithmetic sequence*** **2 , 11 , 20 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **263** ***in this sequence*** **?**
25	***Consider the arithmetic sequence*** **3 , 10 , 17 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **136** ***in this sequence*** **?**
26	***Consider the arithmetic sequence*** **7 , 11 , 15, ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **123** ***in this sequence*** **?** **d)** ***Is*** **130** ***a term of this sequence*** **?** ***Why*** **?**
27	***Consider the arithmetic sequence*** **9 , 14 , 19, ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **154** ***in this sequence*** **?** **d)** ***Is*** **170** ***a term of this sequence*** **?** ***Why*** **?**
28	**4^{th}** ***term of an arithmetic sequence is*** **14** ***and its*** **9^{th}** ***term is*** **29**

	a) ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***Find the position of 62 in this sequence*** **?**
29	**5th** ***term of an arithmetic sequence is*** **31** ***and its*** **11th** ***term is*** **67** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***Find the position of*** **601** ***in this sequence*** **?**
30	**10th** ***term of an arithmetic sequence is*** **74** ***and its*** **20th** ***term is*** **154** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***Find the position of*** **474** ***in this sequence*** **?**
31	**8th** ***term of an arithmetic sequence is*** **29** ***and its*** **15th** ***term is*** **57** **a)** ***What is its common difference*** **?** **b)** ***What is its first term*** **?** **c)** ***Find the position of*** **97** ***in this sequence*** **?**
32	***Consider the arithmetic sequence*** **4 , 7 , 10 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **16** ***in this sequence*** **?** **d)** ***Check whether the square of any term is a term of this sequence or not ?***
33	***Consider the arithmetic sequence*** **7 , 13 , 19 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of 49 in this sequence*** **?** **d)** ***Check whether the square of any term is a term of this sequence or not ?***
34	***Consider the arithmetic sequence*** **6 , 11 , 16 , ...**

	a) ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of*** **36** ***in this sequence*** **?** **d)** ***Check whether the square of any term is a term of this sequence or not ?***
35	***Consider the arithmetic sequence*** **3 , 13 , 23 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Write down the next three terms of this sequence ?*** **d)** ***Is there any perfect square term in this sequence ? Justify your answer ?***
36	***Consider the arithmetic sequence*** **7 , 12 , 17 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Write down the next three terms of this sequence ?*** **d)** ***Is there any perfect square term in this sequence ? Justify your answer ?***
37	***Consider the arithmetic sequence*** **70 , 67 , 64 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is the remainder when each positive term of this sequence is divided by*** **3 ?** **c)** ***Which is the smallest positive number in this sequence*** **?** **d)** ***Which is the largest negative number in this sequence*** **?**
38	***Consider the arithmetic sequence*** **92 , 88 , 84 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is the remainder when each positive term of this sequence is divided by*** **4 ?** **c)** ***Which is the smallest positive number in this sequence*** **?** **d)** ***Which is the largest negative number in this sequence*** **?**
39	***Consider the arithmetic sequence*** **63 , 58 , 53 , ...**

	a) ***What is its common difference ?*** **b)** ***What is the remainder when each positive term of this sequence is divided by 5 ?*** **c)** ***Which is the smallest positive number in this sequence ?*** **d)** ***What is its algebraic form ?*** **e)** ***How many positive numbers are there in this sequence ?***
40	***Consider the arithmetic sequence 82 , 72 , 62 , ...*** **a)** ***What is its common difference ?*** **b)** ***What is the remainder when each positive term of this sequence is divided by 10 ?*** **c)** ***Which is the smallest positive number in this sequence ?*** **d)** ***What is its algebraic form ?*** **e)** ***How many positive numbers are there in this sequence ?***
41	***Consider the arithmetic sequence 6 , 10 , 14 , ...*** **a)** ***What is its common difference ?*** **b)** ***What is its algebraic form ?*** **c)** ***Find the position of the term obtained by adding 40 to its 20^{th} term ?***
42	***Consider the arithmetic sequence 7 , 10 , 13 , ...*** **a)** ***What is its common difference ?*** **b)** ***What is its algebraic form ?*** **c)** ***Find the position of the term obtained by adding 27 to its 15^{th} term ?***
43	***Consider the arithmetic sequence 8 , 14 , 20 , ...*** **a)** ***What is its common difference ?*** **b)** ***What is its algebraic form ?*** **c)** ***Find the position of the term obtained by subtracting 48 from its 40 th term ?***

44	***Consider the arithmetic sequence*** **3 , 8 , 13 , ...** **a)** ***What is its common difference*** **?** **b)** ***What is its algebraic form*** **?** **c)** ***Find the position of the term obtained by subtracting*** **100** ***from its*** **30** th ***term ?***
45	***Consider the sequence of two digit numbers which leave a remainder*** **1** ***on divisible by*** **3 .** **a)** ***What is its common difference*** **?** **b)** ***Which is the smallest number in this sequence*** **?** **c)** ***How many two digit numbers are there , which leave a remainder 1 on divisible by 3 ?***
46	***Consider the sequence of three digit numbers which leave a remainder*** **1** ***on divisible by*** **5 .** **a)** ***What is its common difference*** **?** **b)** ***Which is the smallest number in this sequence*** **?** **c)** ***How many three digit numbers are there , which leave a remainder*** **1** ***on divisible by 5*** **?**
47	***Find the following sums .*** **a) 1 + 2 + 3 + 4 + 5 + ... + 20** **b) 2 + 4 + 6 + 8 + 10 + ... + 40** **c) 5 + 7 + 9 + 11 + 13 + ... + 43**
48	***Find the following sums .*** **a) 1 + 2 + 3 + 4 + 5 + ... + 40** **b) 5 + 10 + 15 + 20 + 25 + ... + 200** **c) 7 + 12 + 17 + 22 + 27 + ... + 202**

49	***Find the following sums .*** **a) 1 + 2 + 3 + 4 + 5 + ... + 60** **b) 4 + 8 + 12 + 16 + 20 + ... + 240** **c) 5 + 9 + 13 + 17 + 21 + ... + 241** **d) 9 + 17 + 25 + 33 + 41 + ... + 481**
50	***Find the following sums .*** **a) 1 + 2 + 3 + 4 + 5 + ... + 100** **b) 3 + 6 + 9 + 12 + 15 + ... + 300** **c) 13 + 16 + 19 + 22 + 25 + ... + 310** **d) 12 + 15 + 18 + 21 + 24 + ... + 309**
51	***Consider the arithmetic sequence* 5 , 9 , 13 , ...** **a) *What is its common difference* ?** **b) *What is its* 7 th *term* ?** **c) *What is the sum of first* 13 *terms of this sequence* ?**
52	***Consider the arithmetic sequence* 8 , 15 , 22 , ...** **a) *What is its common difference* ?** **b) *What is its* 6th *term* ? ?** **c) *What is the sum of first* 11 *terms of this sequence* ?**
53	***Consider the arithmetic sequence* 5 , 9 , 13 , ...** **a) *What is its common difference* ?** **b) *What is its* 8th *term* ?** **c) *What is the sum of first* 15 *terms of this sequence* ?**
54	***First term f an arithmetic sequence is* 7 *and its common difference is* 5 .** **a) *What is its* 4 th *term* ?** **b) *What is the sum of first* 7 *terms of this sequence* ?** **c) *What is the sum of first* 8 *terms of this sequence* ?**

55	*First term f an arithmetic sequence is* 9 *and its common difference is* 4 . a) *What is its* 7^{th} *term* ? b) *What is the sum of first* 13 *terms of this sequence* ? c) *What is the sum of first* 14 *terms of this sequence* ?
56	*First term of an arithmetic sequence is* 5 *and its common difference is* 7 . a) *What is its* 11^{th} *term* ? b) *What is the sum of first* 21 *terms of this sequence* ? c) *What is the sum of first* 22 *terms of this sequence* ?
57	*Common difference of an arithmetic sequence is* 3 *and its* 14^{th} *term* 44 . a) *What is its* 15^{th} *term* ? b) *What is the sum of first* 29 *terms of this sequence* ?
58	*Common difference of an arithmetic sequence is* 5 *and its* 21^{st} *term* 108 . a) *What is its* 22^{th} *term* ? b) *What is the sum of first* 43 *terms of this sequence* ?
59	*Common difference of an arithmetic sequence is* 7 *and its* 11^{th} *term* 74 . a) *What is its* 10^{th} *term* ? b) *What is the sum of first* 19 *terms of this sequence* ?
60	*Common difference of an arithmetic sequence is* 8 *and its* 18^{th} *term* 142 . a) *What is its* 17^{th} *term* ? b) *What is the sum of first* 33 *terms of this sequence* ?
61	*The algebraic form of an arithmetic sequence is* 4 n + 3 . a) *What is its* 13^{th} *term* ? b) *What is the sum of first* 25 *terms of this sequence* ?
62	*The algebraic form of an arithmetic sequence is* 7 n + 2 . a) *What is its* 16^{th} *term* ? b) *What is its* 16^{th} *term* ?

63	*The algebraic form of an arithmetic sequence is* 9 n - 5 . a) *What is its* 12^{th} *term* ? b) *What is its* 23^{th} *term* ?
64	4^{th} *term of an arithmetic sequence is* 9 *and its* 10^{th} *term is* 21 . a) *What is its common difference* ? b) *What is its* 5^{th} *term* ? c) *What is the sum of first* 9 *terms of this sequence* ?
65	8^{th} *term of an arithmetic sequence is* 33 *and its* 11^{th} *term is* 45 . a) *What is its common difference* ? b) *What is its* 9^{th} *term* ? c) *What is the sum of first* 17 *terms of this sequence* ?
66	7^{th} *term of an arithmetic sequence is* 37 *and its* 18^{th} *term is* 92 . a) *What is its common difference* ? b) *What is its* 17^{th} *term* ? c) *What is the sum of first* 33 *terms of this sequence* ?
67	16^{th} *term of an arithmetic sequence is* 157 *and its* 26^{th} *term is* 257 . a) *What is its common difference* ? b) *What is its* 25^{th} *term* ? c) *What is the sum of first* 49 *terms of this sequence* ?
68	*The sum of first* 7 *terms of an arithmetic sequence is* 105 *and the sum of first* 15 *terms is* 465 . a) *What is its* 4^{th} *term* ? b) *What is its* 8^{th} *term* ? c) *What is its common difference* ? d) *What is its algebraic form* ?

69	*The sum of first 3 terms of an arithmetic sequence is* 30 *and the sum of first* 13 *terms is* 520 . a) *What is its second term* ? b) *What is its* 7^{th} *term* ? c) *What is its common difference* ? d) *What is its algebraic form* ?
70	*The sum of first* 5 *terms of an arithmetic sequence is* 30 *and the sum of first* 11 *terms is* 132 . a) *What is its* 3^{rd} *term* ? b) *What is its* 6^{th} *term* ? c) *What is its common difference* ? d) *What is its algebraic form* ?
71	*Consider the arithmetic sequence* 7 , 10 , 13 , ... a) *What is its common difference* ? b) *What is its* 10^{th} *term* ? c) *What is the sum of first* 10 *terms of this sequence* ?
72	*Consider the arithmetic sequence* 8 , 14 , 20 , ... a) *What is its common difference* ? b) *What is its* 20^{th} *term* ? c) *What is the sum of first* 20 *terms of this sequence* ?
73	*Consider the arithmetic sequence* 2 , 7 , 12 , ... a) *What is its common difference* ? b) *What is its* 40^{th} *term* ? c) *What is the sum of first* 40 *terms of this sequence* ?
74	*First term f an arithmetic sequence is* 4 *and its common difference is* 3 . a) *What is its* 20^{th} *term* ? b) *What is the sum of first* 20 *terms of this sequence* ?

75	***First term f an arithmetic sequence is* 10 *and its common difference is* 7 .** **a) *What is its* 12 th *term* ?** **b) *What is the sum of first* 12 *terms of this sequence* ?**
76	***Common difference of an arithmetic sequence is* 4 *and its* 15th *term* 62 .** **a) *What is its* 16 th *term* ?** **b) *What is the sum of first* 16 *terms of this sequence* ?**
77	***Common difference of an arithmetic sequence is* 3 *and its* 25th *term is* 76 .** **a) *What is its* 26 th *term* ?** **b) *What is the sum of first* 26 *terms of this sequence* ?**
78	***Common difference of an arithmetic sequence is* 5 *and its* 31 st *term is* 151 .** **a) *What is its* 30th *term* ?** **b) *What is the sum of first* 30 *terms of this sequence* ?**
79	***Common difference of an arithmetic sequence is* 8 *and its* 25 th *term is* 193 .** **a) *What is its* 24 th *term* ?** **b) *What is the sum of first 24 terms of this sequence* ?**
80	***The algebraic form of an arithmetic sequence is* 3 n + 1 .** **a) *What is its* 22 th *term* ?** **b) *What is the sum of first* 22 *terms of this sequence* ?**
81	***The algebraic form of an arithmetic sequence is* 10 n + 3 .** **a) *What is its* 36 th *term* ?** **b) *What is the sum of first* 36 *terms of this sequence* ?**
82	***The algebraic form of an arithmetic sequence is* 11 n - 5 .** **a) *What is its* 20 th *term* ?** **b) *What is the sum of first* 20 *terms of this sequence* ?**

83	**5^{th} *term of an arithmetic sequence is* 15 *and its* 9^{th} *term is* 23 .** **a) *What is its common difference* ?** **b) *What is its* 6^{th} *term* ?** **c) *What is the sum of first* 6 *terms of this sequence* ?**
85	**11^{th} *term of an arithmetic sequence is* 31 *and its* 15^{th} *term is* 43 .** **a) *What is its common difference* ?** **b) *What is its* 12^{th} *term* ?** **c) *What is the sum of first* 12 *terms of this sequence* ?**
86	**8^{th} *term of an arithmetic sequence is* 33 *and its* 17^{th} *term is* 69 .** **a) *What is its common difference* ?** **b) *What is its* 16^{th} *term* ?** **c) *What is the sum of first* 16 *terms of this sequence* ?**
87	**10^{th} *term of an arithmetic sequence is* 54 *and its* 21^{st} *term is* 109 .** **a) *What is its common difference* ?** **b) *What is its* 20^{th} *term* ?** **c) *What is the sum of first* 20 *terms of this sequence* ?**
88	***The sum of first* 5 *terms of an arithmetic sequence is* 130 *and the sum of first* 6 *terms is* 186 .** **a) *What is its third term* ?** **b) *What is its* 6^{th} *term* ?** **c) *What is its common difference* ?** **d) *What is its algebraic form* ?**

89	***The sum of first 7 terms of an arithmetic sequence is 203 and the sum of first 8 terms is 264 .*** **a) *What is its 4 th term ?*** **b) *What is its 8 th term ?*** **c) *What is its common difference ?*** **d) *What is its algebraic form ?***
90	***The sum of first 9 terms of an arithmetic sequence is 99 and the sum of first 10 terms is 120 .*** **a) *What is its 5 th term ?*** **b) *What is its 10 th term ?*** **c) *What is its common difference ?*** **d) *What is its algebraic form ?***
91	***Consider the sequence of two digit even numbers*** **a) *What is its common difference ?*** **b) *Which is the smallest number in this sequence ?*** **c) *How many two digit even numbers are there ?*** **d) *What is the sum of all two digit even numbers ?***
92	***Consider the sequence of three digit odd numbers*** **a) *What is its common difference ?*** **b) *Which is the smallest number in this sequence ?*** **c) *How many three digit odd numbers are there ?*** **d) *What is the sum of all three digit odd numbers ?***

93	***Consider the sequence of two digit numbers which leave a remainder* 1 *on divisible by* 2 **a)** ***What is its common difference*** **?** **b)** ***Which is the smallest number in this sequence*** **?** **c)** ***How many two digit numbers are there which leave a remainder*** 1 ***on divisible by*** 2 **?** **d)** ***What is the sum of such numbers*** **?**
94	***Consider the sequence of three digit numbers which leave a remainder*** 2 ***on divisible by*** 5 **a)** ***What is its common difference*** **?** **b)** ***Which is the smallest number in this sequence*** **?** **c)** ***How many three digit numbers are there which leave a remainder*** 2 ***on divisible by*** 5 **?** **d)** ***What is the sum of such numbers*** **?**
95	***Consider the arithmetic sequence*** 9 , 15 , 21 , ... **a)** ***What is its common difference*** **?** **b)** ***What is the remainder when each term of this sequence is divided by*** 3 **?** **c)** ***What is the sum of first 4 terms of this sequence ?*** **d)** ***Can the sum of any*** 20 ***terms of this sequence be 1000*** **?** ***Why*** **?**
96	***Consider the arithmetic sequence*** 8 , 20 , 32 , ... **a)** ***What is its common difference*** **?** **b)** ***What is the remainder when each term of this sequence is divided by*** 4 **?** **c)** ***What is the sum of first*** 5 ***terms of this sequence ?*** **d)** ***Can the sum of any*** 30 ***terms of this sequence be*** 1090 **?** ***Why*** **?**

97	***Consider the arithmetic sequence*** **7 , 13 , 19 , ...** **a)** ***What is its common difference*** **?** **b)** ***Write down the next three more terms of this sequence*** **?** **c)** ***Can the sum of any*** **25** ***terms of this sequence be 600*** **?** ***Why*** **?**
98	***Consider the arithmetic sequence*** **5 , 9 , 13 , ...** **a)** ***What is its common difference*** **?** **b)** ***Write down the next three more terms of this sequence*** **?** **c)** ***Is the sum any two terms of this sequence again a term of this sequence*** **?** ***Why*** **?**
99	**a)** ***What is the common difference of the sequence*** **5 , 8 , 11 , ...** **?** **b)** ***What is the common difference of the sequence*** **7 , 10 , 13 , ...** **?** **c)** ***What is the difference between the sum of first*** **11** ***terms of these sequences*** **?**
100	**a)** ***What is the common difference of the sequence*** **6 , 10 , 14 , ...** **?** **b)** ***What is the common difference of the sequence*** **8 , 12 , 16 , ...** **?** **c)** ***What is the difference between the sum of first*** **15** ***terms of these sequences*** **?**
101	**a)** ***What is the common difference of the sequence*** **5 , 10 , 15 , ...** **?** **b)** ***What is the common difference of the sequence*** **7 , 12 , 17 , ...** **?** **c)** ***What is the difference between the sum of first*** **13** ***terms of these sequences*** **?**
102	***Look at the number pattern given below.*** **1** **2 3** **4 5 6** **7 8 9 10** **.....** **.....**

	a) ***Write down the next two more lines of this pattern*** **?** **b)** ***How many numbers are there in the*** **10** th ***line*** **?** **c)** ***What is the last number in the*** **9** th ***line*** **?** **d)** ***What is the first number in the*** **10** th ***line*** **?** **e)** ***What is the sum of the numbers in the 10***th ***line*** **?**
103	***Look at the number pattern given below.*** **1** **2 3** **4 5 6** **7 8 9 10** **.....** **.....** **a)** ***Write down the next two more lines of this pattern*** **?** **b)** ***How many numbers are there in the*** **20** th ***line*** **?** **c)** ***What is the last number in the*** **19** th ***line*** **?** **d)** ***What is the first number in the*** **20** th ***line*** **?** **e)** ***What is the sum of all numbers in the first 20 lines ?***
104	***Look at the number pattern given below.*** **1** **2 3** **4 5 6** **7 8 9 10** **.....** **.....**

a) *Write down the next two more lines of this pattern ?*

b) *What is the last number in the* 14 th *line ?*

c) *What is the first number in the* 15 th *line ?*

d) *How many numbers are there in the* 15 th *line ?*

e) *What is the sum of the numbers in the* 15 th *line ?*

105 *What is the measure of the largest angle ?*

Pattern 1	Pattern 2
1	3
2 3	6 9
4 5 6	12 15 18
7 8 9 10	21 24 27 30
.....	.....
.....	.....

	Pattern 1	Pattern 2
The next two more lines ofthe patterns	a)	b).....
last number in the 8 th line	c)	d) .....
First number in the 8 th line	e)	f).....

106 *Look at the number patterns given below.*

Pattern 1	Pattern 2
1	4
2 3	7 10
4 5 6	13 16 19
7 8 9 10	22 25 28 31
.....	.....
.....	.....

	Pattern 1	Pattern 2
The next two more lines ofthe patterns	a)	b).....
last number in the 9 th line	c)	d) .....
First number in the 10 th line	e)	f).....

107 *Look at the number patterns given below.*

1

2 3

4 5 6

7 8 9 10

.....

.....

(*Pattern* 1)

6

10 14

18 22 26

30 34 38 42

.....

.....

(*Pattern* 2)

	Pattern 1	Pattern 2
The next two more lines of the patterns	a)	b).....
last number in the 12 th line	c)	d) .....
First number in the 13 th line	e)	f).....

108 *Look at the number pattern given below.*

1

2 3 4

5 6 7 8 9

10 11 12 13 14 15 16

.....

.....

	a) ***Write down the next two more lines of this pattern*** **?** **b)** ***How many numbers are there in the*** **10** th ***line*** **?** **c)** ***What is the last number in the*** **9** th ***line*** **?** **d)** ***What is the first number in the*** **10** th ***line*** **?** **e)** ***What is the sum of the numbers in the*** 10^{th} ***line*** **?**
109	***Look at the number pattern given below.*** **1** **2 3 4** **5 6 7 8 9** **10 11 12 13 14 15 16** **.....** **.....** **a)** ***Write down the next two more lines of this pattern*** **?** **b)** ***How many numbers are there in the*** **12** th ***line*** **?** **c)** ***What is the last number in the*** **11** th ***line*** **?** **d)** ***What is the first number in the*** **12** th ***line*** **?** **e)** ***What is the sum of the numbers in the*** **12** th ***line*** **?**

EXTRA QUESTIONS

110	***The sum of the first and 7th terms of an arithmetic sequence is 22*** **a)** ***What is the sum of its 3rd and 5th terms ?*** **b)** ***What is its 4th term ?*** **c)** ***What is the sum of first 7 terms of this sequence ?***
111	***The sum of the first and 11th terms of an arithmetic sequence is 40 .*** **a)** ***What is the sum of its 5 th and 7 th terms ?*** **b)** ***What is its 6th term ?*** **c)** ***What is the sum of first 11 terms of this sequence ?***
112	***The sum of the first and 25th terms of an arithmetic sequence is 200.*** **a)** ***What is the sum of its 12 th and 14 th terms ?*** **b)** ***What is its 13th term ?*** **c)** ***What is the sum of first 25 terms of this sequence ?***
113	***The sum of first 4 terms of an arithmetic sequence is 20 and the sum of first 8 terms is 72 .*** **a)** ***What is the sum of its first and 4 th terms ?*** **b)** ***What is the sum of its first and 8 th terms ?*** **c)** ***What is its common difference ?*** **d)** ***What is its first term ?***
114	***The sum of first 6 terms of an arithmetic sequence is 78 and the sum of first 14 terms is 406 .*** **a)** ***What is the sum of its first and 6 th terms ?*** **b)** ***What is the sum of its first and 14 th terms ?*** **c)** ***What is its common difference ?*** **d)** ***What is its first term ?***

115	***The sum of first 10 terms of an arithmetic sequence is 120 and the sum of first 20 terms is 440 .*** **a)** ***What is the sum of its first and 10 th terms ?*** **b)** ***What is the sum of its first and 20 th terms ?*** **c)** ***What is its common difference ?*** **d)** ***What is its first term ?***
116	***The sum of first 3 terms of an arithmetic sequence is 33 and the sum of first 8 terms is 208 .*** **a)** ***What is its second term ?*** **b)** ***What is the sum of its second and 7 th terms ?*** **c)** ***What is its common difference ?*** **d)** ***What is its algebraic form ?***
117	***The sum of first 5 terms of an arithmetic sequence is 105 and the sum of first 10 terms is 410 .*** **a)** ***What is its third term ?*** **b)** ***What is the sum of its third and 8 th terms ?*** **c)** ***What is its common difference ?*** **d)** ***What is its algebraic form ?***
118	***The sum of first 9 terms of an arithmetic sequence is 108 and the sum of first 16 terms is 304 .*** **a)** ***What is its 5 th term ?*** **b)** ***What is the sum of its 5 th and 12 th terms ?*** **c)** ***What is its common difference ?*** **d)** ***What is its algebraic form ?***

119	***The sum of 8 th and 9 th terms of an arithmetic sequence is 40 .*** **a)** ***What is the sum of its first and 16 th terms ?*** **b)** ***What is the sum of first 16 terms of this sequence ?***
120	***The sum of 10 th and 11 th terms of an arithmetic sequence is 65 .*** **a)** ***What is the sum of its first and 20 th terms ?*** **b)** ***What is the sum of first 20 terms of this sequence ?***
121	***The sum of 2 nd and 11 th terms of an arithmetic sequence is 67 .*** **a)** ***What is the sum of its first and 12 th terms ?*** **b)** ***What is the sum of first 12 terms of this sequence ?***
122	***The sum of 3 rd and 16 th terms of an arithmetic sequence is 70 .*** **a)** ***What is the sum of its first and 18 th terms ?*** **b)** ***What is the sum of first 18 terms of this sequence ?***
123	***The sum of 6th and 7th terms of an arithmetic sequence is 43*** **a)** ***What is the sum of its first and 12th terms ?*** **b)** ***What is the sum of first 12 terms of this sequence ?*** **c)** ***If the 3rd term of this sequence is 11 , what is its 10th term ?*** **d)** ***What is its common difference ?*** **e)** ***What is its algebraic form ?***
124	***The sum of 10 th and 11 th terms of an arithmetic sequence is 90*** **a)** ***What is the sum of its first and 20th terms ?*** **b)** ***What is the sum of first 20 terms of this sequence ?*** **c)** ***If the 8 th term of this sequence is 35 , what is its 13th term ?*** **d)** ***What is its common difference ?*** **e)** ***What is its algebraic form ?***

125	***The sum of 8 th and 9 th terms of an arithmetic sequence is 32*** **a)** ***What is the sum of its first and 16 th terms ?*** **b)** ***What is the sum of first 16 terms of this sequence ?*** **c)** ***If the 11 th term of this sequence is 21 , what is its 6 th term ?*** **d)** ***What is its common difference ?*** **e)** ***What is its algebraic form ?***
126	***The sum of 5 th and 6 th terms of an arithmetic sequence is 62*** **a)** ***What is the sum of its first and 10 th terms ?*** **b)** ***What is the sum of first 10 terms of this sequence ?*** **c)** ***If the 9 th term of this sequence is 52 , what is its 2 nd term ?*** **d)** ***What is its common difference ?*** **e)** ***What is its algebraic form ?***
127	***Consider the arithmetic sequence 5 , 8 , 11 , ...*** **a)** ***What is its common difference ?*** **b)** ***How many times of the common difference is the difference between 31st and first terms of this sequence ?*** **c)** ***What is the difference between its 60th and 30th terms ?*** **d)** ***What is the difference between the sum of first 30 terms and the sum of next 30 terms ?***
128	***Consider the arithmetic sequence 7 , 11 , 15 , ...*** **a)** ***What is its common difference ?*** **b)** ***How many times of the common difference is the difference between 21st and first terms of this sequence ?*** **c)** ***What is the difference between its 40th and 20th terms ?*** **d)** ***What is the difference between the sum of first 20 terms and the sum of next 20 terms ?***

129	*Consider the arithmetic sequence* 8 , 14 , 20 , ... a) *What is its common difference* ? b) *How many times of the common difference is the difference between* 16 th *and first terms of this sequence ?* c) *What is the difference between its* 30^{th} *and* 15^{th} *terms* ? d) *What is the difference between the sum of first* 15 *terms and the sum of next* 15 *terms ?*
130	*The sum of first 13 terms of an arithmetic sequence and the sum of next 12 terms are equal . If its common difference is* 4 , a) *How many times of the common difference is the difference between* 14 th *and first terms of this sequence ?* b) *What is the difference between its* 25 th *and* 12 th *terms* ? c) *What is its* 13^{th} *term* ? d) *What is the sum of first* 25 *terms of this sequence* ?
131	*The sum of first* 10 *terms of an arithmetic sequence and the sum of next* 9 *terms are equal . If its common difference is* 2 , a) *How many times of the common difference is the difference between* 11 th *and first terms of this sequence ?* b) *What is the difference between its* 19 th *and* 9 th *terms* ? c) *What is its* 10 th *term* ? d) *What is the sum of first* 19 *terms of this sequence* ?
132	*The sum of first* 8 *terms of an arithmetic sequence and the sum of next* 7 *terms are equal . If its common difference is* 5 , a) *How many times of the common difference is the difference between* 9 th *and first terms of this sequence ?*

	b) ***What is the difference between its*** **15** **th** ***and*** **7** **th** ***terms*** **?** **c)** ***What is its*** **8** **th** ***term*** **?** **d)** ***What is the sum of first*** **15** ***terms of this sequence*** **?**
133	***The angles of a quadrilateral are in arithmetic sequence . The smallest angle is*** **30^0 .** **a)** ***What is the sum of the angles of a quadrilateral*** **?** **b)** ***What is the measure of the largest angle*** **?** **c)** ***What is the common difference of the sequence*** **?** **d)** ***What are the measures of other angles*** **?**
134	***The angles of a hexagon are in arithmetic sequence . The smallest angle is*** **80^0 .** **a)** ***What is the sum of the angles of a hexagon*** **?** **b)** ***What is the measure of the largest angle*** **?** **c)** ***What is the common difference of the sequence*** **?** **d)** ***What are the measures of other angles*** **?**
135	***The angles of a pentagon are in arithmetic sequence . The smallest angle is*** **40^0 .** **a)** ***What is the sum of the angles of a pentagon*** **?** **b)** ***If the angles are written as arithmetic sequence , what will be its third term*** **?** **c)** ***What is the common difference of the sequence*** **?** **d)** ***What is the measure of the largest angle*** **?**