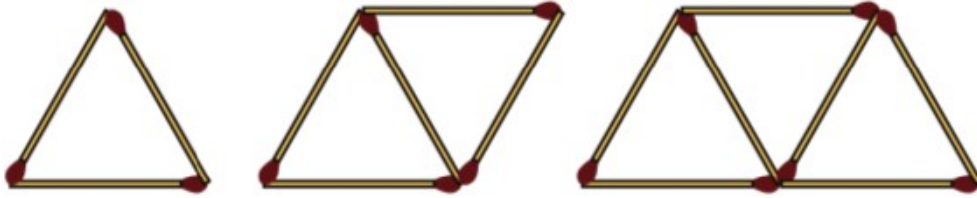


WANDOOR GANITHAM – S.S.L.C STUDY MATERIAL 2021

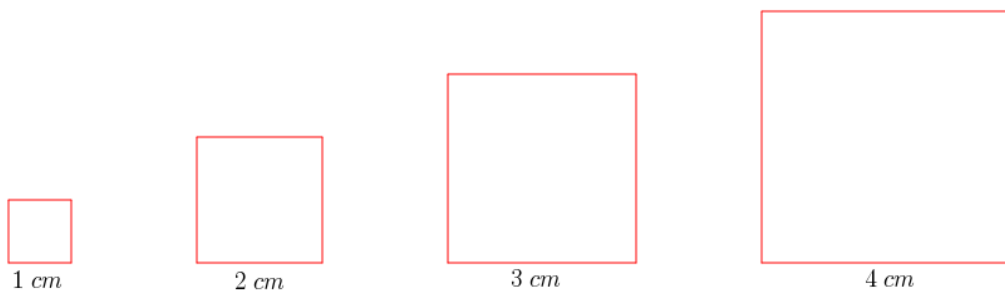
FOCUS AREA - QUESTION BANK - ARITHMETIC SEQUENCES

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



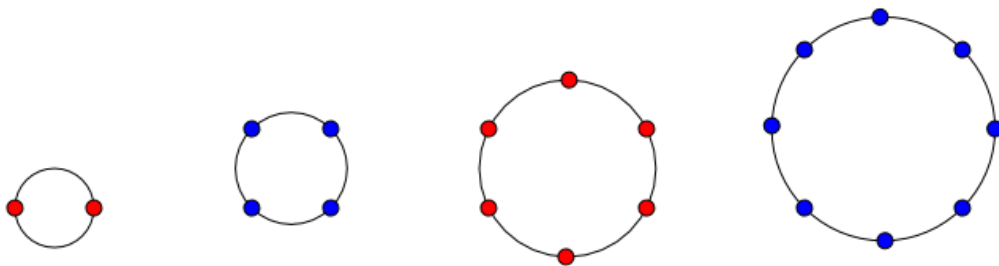
- If we continue this process , how many matchsticks are there in the fifth figure?*
- If we continue this process , what is the sequence of numbers of matchsticks used in each figure ?*
- Check whether the sequence obtained above is an arithmetic sequence or not ?*

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

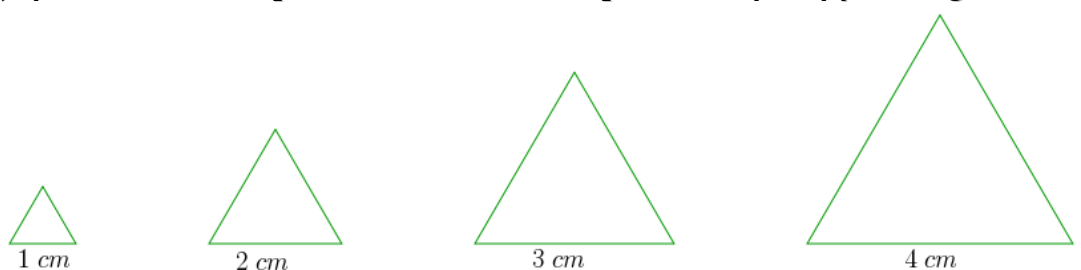


- If we continue this process ,what will be the perimeter of the fifth square ?*
- If we continue this process , what is the sequence of the perimeter of the squares ?*
- Check whether the sequence obtained above is an arithmetic sequence or not ?*

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



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

	<p>b) If we continue this process , what is the sequence of the dots in in each circle ?</p> <p>c) Check whether the sequence obtained above is an arithmetic sequence or not ?</p>
4	<p>In the figure some equilateral triangles are drawn . Length of the sides of them are also shown in the figure .</p> <p>a) If we continue this process ,what will be the perimeter of the fifth triangle ?</p> <div style="text-align: center;">  <p>The figure shows four equilateral triangles drawn in a row. From left to right, their side lengths are labeled as 1 cm, 2 cm, 3 cm, and 4 cm. Each triangle is drawn with a thin green line.</p> </div> <p>b) If we continue this process , what is the sequence of the perimeter of the triangles ?</p> <p>c) Check whether the sequence obtained above is an arithmetic sequence or not ?</p>
5	<p>a) Write the sequence of natural numbers which are multiplied by 3 ?</p> <p>b) Write the sequence of natural numbers which are multiplied by 3 and added to 1 ?</p> <p>c) Check whether the sequence obtained above is an arithmetic sequence or not ?</p>
6	<p>a) Write the sequence of natural numbers which are multiplied by 5 ?</p> <p>b) Write the sequence of natural numbers which are multiplied by 5 and subtract 2 from them ?</p> <p>c) Check whether the sequence obtained above is an arithmetic sequence or not ?</p>
7	<p>a) Write down the sequence of natural numbers ending in 1 ?</p> <p>b) Check whether the sequence obtained above is an arithmetic sequence or not ?</p>
8	<p>a) Write down the sequence of natural numbers ending in 2 or 7 ?</p> <p>b) Check whether the sequence obtained above is an arithmetic sequence or not ?</p>
9	<p>a) Write an arithmetic sequence of first term 7 and common difference 4 ?</p> <p>b) What is its 11th term ?</p> <p>c) Can the difference between any two terms of this sequence be 100 ? Why ?</p>
10	<p>a) Write an arithmetic sequence of first term 10 and common difference 6 ?</p>

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

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

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

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

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

- 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 20th 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 15th 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 40th term ?*

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

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

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

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

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

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

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

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

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

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

- a) Write down the next two more lines of this pattern ?
- b) How many numbers are there in the 10th line ?
- c) What is the last number in the 9th line ?
- d) What is the first number in the 10th line ?
- e) What is the sum of the numbers in the 10th 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 20th line ?
- c) What is the last number in the 19th line ?
- d) What is the first number in the 20th 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 14th line ?
- c) What is the first number in the 15th line ?
- d) How many numbers are there in the 15th line ?
- e) What is the sum of the numbers in the 15th line ?

105 What is the measure of the largest angle ?

<p>1</p> <p>2 3</p> <p>4 5 6</p> <p>7 8 9 10</p> <p>.....</p> <p>.....</p> <p>(Pattern 1)</p>	<p>3</p> <p>6 9</p> <p>12 15 18</p> <p>21 24 27 30</p> <p>.....</p> <p>.....</p> <p>(Pattern 2)</p>
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	Pattern 1	Pattern 2
The next two more lines of the 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.

<p>1</p> <p>2 3</p> <p>4 5 6</p> <p>7 8 9 10</p> <p>.....</p> <p>.....</p> <p>(Pattern 1)</p>	<p>4</p> <p>7 10</p> <p>13 16 19</p> <p>22 25 28 31</p> <p>.....</p> <p>.....</p> <p>(Pattern 2)</p>
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	<i>Pattern 1</i>	<i>Pattern 2</i>
<i>The next two more lines of the patterns</i>	a)	b).....
<i>last number in the 9th line</i>	c)	d)
<i>First number in the 10th line</i>	e)	f).....

107 *Look at the number patterns given below.*

1	6
2 3	10 14
4 5 6	18 22 26
7 8 9 10	30 34 38 42
.....
.....
(<i>Pattern 1</i>)	(<i>Pattern 2</i>)

	<i>Pattern 1</i>	<i>Pattern 2</i>
<i>The next two more lines of the patterns</i>	a)	b).....
<i>last number in the 12th line</i>	c)	d)
<i>First number in the 13th line</i>	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 10th line ?
- c) What is the last number in the 9th line ?
- d) What is the first number in the 10th line ?
- e) What is the sum of the numbers in the 10th 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 12th line ?
- c) What is the last number in the 11th line ?
- d) What is the first number in the 12th line ?
- e) What is the sum of the numbers in the 12th line ?

EXTRA QUESTIONS

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

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

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

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

129	<p>Consider the arithmetic sequence 8, 14, 20,</p> <p>a) What is its common difference ?</p> <p>b) How many times of the common difference is the difference between 16th and first terms of this sequence ?</p> <p>c) What is the difference between its 30th and 15th terms ?</p> <p>d) What is the difference between the sum of first 15 terms and the sum of next 15 terms ?</p>
130	<p>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 ,</p> <p>a) How many times of the common difference is the difference between 14th and first terms of this sequence ?</p> <p>b) What is the difference between its 25th and 12th terms ?</p> <p>c) What is its 13th term ?</p> <p>d) What is the sum of first 25 terms of this sequence ?</p>
131	<p>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 ,</p> <p>a) How many times of the common difference is the difference between 11th and first terms of this sequence ?</p> <p>b) What is the difference between its 19th and 9th terms ?</p> <p>c) What is its 10th term ?</p> <p>d) What is the sum of first 19 terms of this sequence ?</p>
132	<p>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 ,</p> <p>a) How many times of the common difference is the difference between 9th and first terms of this sequence ?</p>

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