Arithmetic Sequences and Series Worksheet

1. Write down the stated term and the nth term of the following arithmetic sequences
   1. 7, 11, 15, … (7th) c. 18, 11, 4, … (6th )
   2. -7, -5, -3, … (23rd) d. 3, 3 ½, 4, … (16th)
2. Find the sum of the following series. (hint: use the formula for arithmetic sequences first to find n)
   1. 5, 9, 13, …, 101 c. 83, 80, 77, …, 5
   2. -17, -12, -7,…, 33 d. 1, 1 ¼ , 1 ½, … 9 ¾
3. Find the sum of the following series.
   1. 4, 11, … to 16 terms c. 3, 8 ½, … to 20 terms
   2. 19, 13, … to 10 terms d. -9, -1, … to 8 terms
4. Fill in the gaps in this arithmetic sequence: -3, \_\_\_, \_\_\_, \_\_\_, \_\_\_, \_\_\_, 12
5. An arithmetic sequence has a 10th term of 17 and a 14th term of 30. Find the common difference.
6. If u59 = and u100 =-1 for an arithmetic sequence, Find the first term and the common difference.
7. Find the sum of the first 100 odd numbers
8. Find the sum of the positive terms of the arithmetic sequence 85, 78, 71, …
9. The second term of an arithmetic sequence is 7. The sum of the first 4 terms of the arithmetic sequence is 12. Find the first term u1, and the common difference, d, of the sequence.
10. The first, second, and the nth terms of an arithmetic sequence are 2, 6, and 58 respectively,
    1. Find the value of n
    2. For that value of n, find the exact value of the sum of n terms.
11. The 10th term of an arithmetic sequence is 10 and the sum of the first 10 terms is -35. Find the first term u1, and the common difference, d, of the sequence.

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