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Worksheet: Arithmetic Progression

1. What is the common difference of an arithmetic progression (A.P.) in which a■■■■ – a■■■ = 84?
2. If the 2nd term of an AP is 13 and the 5th term is 25, then its 7th term is
3. If 17th term of an A.P. exceeds its 10th term by 7. The common difference is:
4. If the sum of three numbers in an A.P. is 9 and their product is 24, then numbers are
5. The 21st term of AP whose first two terms are -3 and 4 is:
6. The 4■■ term of an A.P. is zero. Prove that the 25■■ term of the A.P. is three times its 11■■ term.
7. Which term of the AP : 21, 18, 15, . . . is – 81? Also, is any term 0? Give reason for your answer.
8. Which term of the given AP : 3, 8, 13, 18, . . . ,is 78?
9. An AP consists of 50 terms of which 3rd term is 12 and the last term is 106. Find the 29th term.
10. For what value of k will k + 9, 2k – 1 and 2k + 7 are the consecutive terms of an A.P.?
11. Reshma wanted to save at least ■ 6,500 for sending her daughter to school next year (after 12 months). She saved ■ 450 in the first month and raised her saving by ■ 20 every next month. How much will she be able to save in next 12 months? Will she be able to send her daughter to the school next year? What value is reflected in this question?
12. Which term of the A.P. 3, 8, 13, 18, … is 78?
13. If the common difference of an AP is 3, then what is a15 – a9 ?
14. A person saves ■500 in the first month and increases savings by ■100 every month. How much does he save in the 12th month?
15. In a school, students decided to plant trees in and around the school to reduce air pollution. It was decided that the number of trees, that each section of each class will plant, will be double of the class in which they are studying. If there are 1 to 12 classes in the school and each class has two sections, find how many trees were planted by the students. Which value is shown in this question?
16. Find the sum of all natural numbers that are less than 100 and divisible by 4.
17. The number of multiples of 4 between 10 and 250 is:
18. If the ratio of the sum of the first n terms of two A.Ps is (7n + 1) ■ (4n + 27), then find the ratio of their 9th terms.
19. Check whether – 150 is a term of the AP : 11, 8, 5, 2 . . .

20. Find the middle term of the sequence formed by all three–digit numbers which leave a remainder 3, when divided by 4. Also find the sum of all numbers on both sides of the middle term separately.