JSUNIL TUTORIAL,SAMASTIPUR

PRACTICE - ASSIGNMENT – X ARITHMETIC PROGRESSION

Q. 1. Determine k so that k + 2, 4k - 6 and 3k - 2 are three consecutive terms of an AP.Q. 2. If m th term of A.P. is , and nth term is , show that the mn th terms is 1.

Q. 3. The first, second and the last terms of an AP are p, q and 2p respectively. Show that its sum is [3pq]/[2(q-p)].

Q. 4. A circle is completely divided into n sectors in such a way that the angles of the sectors are in arithmetic progression. If the smallest-of these angles is 8° and the largest 72°, calculate n and the angle in the fourth sector.

Q. 5. Which term of AP: 3, 10, 17 ... will be 84 more than its 13^{th} term?

Q. 6. If 9^{th} term of an AP is zero, prove that 29^{th} term is double the 19^{th} term.

Q. 7. Find a, b such that 27, a, b - 6 are in A.P.Q. 8. For what value of n, the nth terms of the sequences 3, 10, 17,... and 63, 65, 67,... are equal.

Q. 9. If m times the m th term of an AP is equal to n times its nth term show that the (m + n)th term of the AP is zero.

Q. 10.Find the sum of all odd integers between 78 and 500 which are divisible by 7.

Q. 11. Find n, if the given value of x is nth term of A.P. 17, 22, 27, 32, ...; x = 267

Q. 12. Find the sum of all the odd numbers between 100 and 200

Q. 13.If 10 times the 10th term of an AP is equal to 15 times its 15th term, show that its 25th term is zero.

Q.14. Find the sum 2+4+6+. . . +202

Q. 15. How many terms are there in the A.P -1,-5/6,-2/3,-1/2…….10/3? Also find its general term?

Q. 16. 3 times the tenth term is equal to 5 times the twentieth term. Find twentieth term.

Q. 17.The 5th term of an AP is 24 and its 15th term is 74. Find the sum of its first 10 terms.

Q. 18. If the first term and last term of an AP are a and l respectively and its sum is S , prove that the common difference of the AP is equal to $(l^2 – a^2) / [2S-(l+a)]$.

Q. 19. If the difference between the 21st and 10th terms of an AP is 55, find the difference between the 45thand 40th terms.

Q. 20.Find three numbers in an A.P. whose sum is 15 and product 80

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