SUCCESS INSTITUTE Assignment - 53 10th Class Expert

Q1. The 19^{th} term of an AP is equal to three times its 6^{th} term. If its 9^{th} term is 19, find the AP. Ans. 3, 5, 7, . . .

Q2. The 9^{th} term of an AP is equal to six times its 2^{nd} term. If its 5^{th} term is 22, find the AP. Ans. 2, 7, 12, . . .

Q3. The sum of 5^{th} and 9^{th} terms of an AP is 30. If its 25^{th} term is three times its 8^{th} term, find the AP. Ans. 3, 5, 7, . . .

Q4. How many 2-digit numbers are divisible by 3 ? Ans. 30

Q5. How many 2-digit numbers are divisible by 7 ? Ans. 13

Q6. How many multiples of 4 lie between 10 and 250 ? Ans. 60

Q7. How many multiples of 7 lie between 10 and 350 ? Ans. 48

Q8. How many 3-digit numbers are divisible by 7 ? Ans. 128

Q9. How many 3-digit numbers are divisible by 9 ? Ans. 100

Q10. Which term of the AP : 3, 10, 17, ... will be 84 more than its 13^{th} term ? Ans. 25^{th}

Q11. Which term of the AP : 3, 15, 27, ... will be 132 more than its 54^{th} term ? Ans. 65^{th}

Q12. Which term of the AP : 8, 14, 20, ... will be 72 more than its 41^{st} term ? Ans. 53^{rd}

Q13. Which term of the AP : 5, 15, 25, ... will be 130 more than its 31^{st} term ? Ans. 44^{th}

Q14. For what value of n, are the n^{th} term of the two APs : 63, 65, 67, . . . and 3, 10, 17, . . . equal ? Ans. 13^{th}

Q15. For what value of n, are the n^{th} term of the two APs : 13, 19, 25, . . . and 69, 68, 67, . . . equal ? Ans. 9^{th}

Q16. For what value of n, are the n^{th} term of the two APs : 48, 50, 52, . . . and 4, 10, 16, . . . equal ? Ans. 12^{th}

Q17. Two APs have the same common difference. The difference between their 100^{th} terms is 100. What is the difference between their 1000^{th} terms ? Ans. 100

Q18. Two APs have the same common difference. The difference between their 50^{th} terms is 30. What is the difference between their 70^{th} terms ? Ans. 30

Q19. In the following APs, find the missing terms :

(i) 2 , ☐ , 26 (ii) 4 , ☐ , 38 (iii) 5 , ☐ , ☐ , $9\frac{1}{2}$

(iv) 7 , ☐ , ☐ , $14\frac{1}{2}$ (v) -4 , ☐ , ☐ , ☐ , ☐ , 6 (vi) -8 , ☐ , ☐ , ☐ , ☐ , 12

(vii) ☐ , 13 , ☐ , 3 (viii) ☐ , 18 , ☐ , 6 (ix) ☐ , 38 , ☐ , ☐ , ☐ , -22

Ans. (i) 14 (ii) 21 (iii) $6\frac{1}{2}$, 8 (iv) $9\frac{1}{2}$, 12 (v) -2 , 0 , 2 , 4 (vi) -4 , 0 , 4 , 8

(vii) 18 , 8 (viii) 24 , 12 (ix) 53 , 23 , 8 , -7