SUCCESS INSTITUTE — Assignment - 54 — 10th Class Expert

Q1. If the 7^{th} and 13^{th} terms of an AP be 34 and 64 respectively , then find its 18^{th} term. Ans. 89

Q2. If the 7^{th} and 9^{th} terms of an AP be $\frac{1}{9}$ and $\frac{1}{7}$ respectively , then find its 63^{rd} term. Ans. 1

Q3. If k , $k-1$ and $2k+1$ are three consecutive terms of an AP , then find the value of k. Ans. K = -3

Q4. If $2x$, $x+10$ and $3x+2$ are three consecutive terms of an AP , then find the value of x. Ans. x = 6

Q5. If $p-1$, $p+3$ and $3\text{p}-1$ are in AP , then find the value of p. Ans. p = 4

Q6. If $3y-1$, $3y+5$ and $5\text{y}+1$ are in AP , then find the value of y. Ans. y = 5

Q7. What is the common difference of an AP in which $a_{18}-a_{14}=32$? $Ans.\ d=8$

Q8. What is the common difference of an AP in which $a_{20}-a_{15}=15$? $Ans.\ d=3$

Q9. If the common difference of an AP is 3 , then what is the value of $a_{18}-a_{13}$? $Ans.\ 15$

Q10. If the common difference of an AP is 8 , then what is the value of $a_{20}-a_{16}$? $Ans.\ 32$

Q11. Which term of the AP : 121 , 117 , 113 , . . . , is first negative term ? Ans. $32^{nd}\ term$

Q12. Which term of the AP : 53 , 48 , 43 , . . . , is first negative term ? Ans. $12^{\text{th}}\ term$

Q13. Which term of the AP : 114 , 109 , 104 , . . . , is first negative term ? Ans. $24^{\text{th}}\ term$

Q14. The 6^{th} term of an AP is zero. Then its 31^{st} term is _____ times the 11^{th} term. Ans. 5

Q15. The 17^{th} term of an AP is 5 more than twice its 8^{th} term. If the 11^{th} term of the AP is 43. Find the n^{th} term.
Ans. $4n-1$

Q16. Determine the AP whose fourth term is 18 and the difference of the 9^{th} term from the 15^{th} term is 30.
Ans. 3 , 8 , 13 , . . .

Q17. The sum of three consecutive terms of an AP is 9. Find the first term. Ans. 3

Q18. The sum of three consecutive terms of an AP is 36. Find the first term. Ans. 12

Q19. The sum of three consecutive terms of an AP is 45. Find the first term. Ans. 15

Q20. Write the first three terms of AP where a_n is defined as below :

(i) $a_n = 3n+2$ (ii) $a_n = 3+4n$ (iii) $a_n = 9-5n$ (iv) $a_n = 5n-3$

Ans. (i) 5 , 8 , 11 , . . . (ii) 7 , 11 , 15 , . . . (iii) 4 , -1 , -6 , . . . (iv) 2 , 7 , 12 , . . .