Tender Heart High School, Sec. 33.B, Chd.

Class : 10th Date : 3rd July 24

Subject : Mathematics Teacher : Ms. Reena

Topic : Arithmetic Progression

Q1 Write an A.P. whose first term is 3 and the common difference is -2

[Ans. 3, 1, -1]

Q2 Find the common difference and write the next three terms of the A.P.

2, -1, -4, -7, --- [Ans. -10, -13, -16]

Q3 If 2, m, 12 forms an A.P., find m

[Ans. 7]

Q4 For what value of 'p'; (p-3), (2p+1) and (4p+3) are in A.P.

[Ans. p = 2]

Q5 The common difference of an A.P. is 4. Find $a_{15} - a_{12}$ [Ans. 12]

Q6 In an A.P., $n = 5$, $d = -3$ and $a_n = 10$. Find a [Ans. 22]

Q7 Which term of the sequence 1, 5, 9, 13 ---- is 77? [Ans. 20]

Q8 Find the middle term(s) of the A.P. 4, 9, 14, ----, 149

[Ans. 74, 79]

Q9 Which term of the A.P. 3, 15, 27, 39 ---
will be 120 more than its 21st term?
[Ans. $n = 31$]

Q10 Determine the A.P. whose 8^{th} term is 31 and 15^{th} term exceeds the 11^{th} term by 16.
[Ans. $a = 3$]

Q11 Find the sum $1 + 7 + 13 + \cdots + 115$
[Ans. 1160]

Q12 Find the sum to n terms of the A.P. 8, 5, 2, -1, ---
[Ans. $\frac{n}{2}[19 - 3n]$]

Q13 Find the sum of first 25 terms of an A.P. whose n^{th} term is given by $a_n = 7 - 3n$
[Ans. -800]

Q14 The sum of first seven terms of an A.P. is 182. If its 4^{th} and 17^{th} terms are in the ratio 1:5, find the A.P.
[Ans. $a = 2$ A.P. = 2, 10, 18, ---]

Q15 Find the sum of all natural numbers between 1 and 100, which are divisible by 3
[Ans. 1683]

Q16 Find the sum of all 2-digit numbers which when divided by 3, yields 1 as a remainder.
[Ans. 10, 13, 16, --- 97
$S_{30} = 1605$]

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