Arithmetic Progressions : Worksheet -3

1. If $t_n = 0$ in the A.P. 84, 80, 76,---------- then n = [ ]

   a) 20 b) 21 c) 22 d) 25

2. Which term of the sequence 24, 23 ¼, 22 ½ ---------- is the first negative? [ ]

   a) 30^{th} b) 32^{nd} c) 33^{rd} d) 34^{th}

3. If the 10^{th} and 18^{th} terms of A.P. are 40 and 72 respectively, then the 26^{th} term [ ]

   a) 100 b) 104 c) 110 d) 115

4. The sum of 4^{th} and 8^{th} terms of an A.P. is 24 and the sum of 6^{th} and 10^{th} terms is 34 then the common difference is [ ]

   a) $\frac{2}{5}$ b) $\frac{5}{2}$ c) $\frac{4}{5}$ d) $\frac{9}{2}$

5. If the angles of a quadrilateral are in A.P. with common difference is 10^o, then the quadrilateral is [ ]

   a) rectangle b) parallelogram

   c) cyclic quadrilateral d) trapezium

6. The sum of all the odd numbers between 100 and 200 is [ ]

   a) 7200 b) 7500 c) 770 d) 7900

7. The sum of all those integers between 100 and 800 each of which on division by 16 leaves the remainder 7 is [ ]

   a) 19866 b) 19886 c) 19866 d) 19668

8. If the sum of n, 2n and 3n terms of an A.P. are S_1, S_2, S_3 respectively then $S_2 - S_1$ = [ ]

   a) S_3 b) $3\ S_3$ c) $\frac{S_3}{3}$ d) $S_3 - S_2$

9. If a, b, c are in A.P. then $4(a - b)(b - c) =$ [ ]

a) $(a + c)^2$ b) $(a - b)^2$ c) $(a - c)^2$ d) $(a + b + c)^2$

10. If there are n AM's between 3 and 17 and the ratio of the last mean to the first mean is 3:1 then n = [ ]

a) 3 b) 4 c) 5 d) 6

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