

Class - XI

A.P. & A.M.

(few important questions from M.L. Aggarwal)

~~4~~ <1> Insert 10 A.M.'s between -5 and 17 and prove that their sum is 10 times the A.M. between -5 and 17.

<2> If A is A.M. between a and b, prove that — $4(a-A)(A-b) = (a-b)^2$

<3> There are n Arithmetic means between 3 and 17. The ratio of the first mean to the last mean is 1:3. Find n.

<4> A man accepts a position with an initial salary of ₹5200 per month. It is understood that he will receive an automatic increase of ₹320 in the very next month and each month thereafter.

(i) Find his salary in the tenth month.

(ii) What is his total earning during the first year.

<5> An N.G.O wants to invest ₹ 200000 in a bond which pays 5% annual interest first year, 6% interest second year, 7% interest third year and so on. The interest received per year is to be utilized for the education of poor people. If the investment is done for 10 years, find the total investment received by NGO.

<6> Kumar buys a Maruti car for ₹ 2,40,000 at a down payment of ₹ 1,20,000 and the rest is annual instalments of ₹ 10,000 plus 12% interest on unpaid amount. Eventually, what will the car cost him?