1. If 19th term of an AP is zero, prove that its 29th term is double the 19th term.
2. Three numbers whose sum is 21 are in AP. If the product of the first and the third numbers exceeds the second number by 6, find the numbers.
3. The sum of first six terms of an AP is 42. The ratio of its 10th term to its 30th term is 1:3. Calculate the 1st and 13th term of AP.
4. Solve the equation: $-4+(-1)+2+...+x = 437$.
5. In an AP, the first term is 22, nth term is -11 and the sum of first n terms is 66. Find n and d, the common difference.
6. Sum of first p, q, r terms of an AP are a, b, c respectively. Prove that :
   $(a/p)(q-r)+(b/q)(r-p)+(c/r)(p-q)=0$.
7. Three hundred sixty bricks are stacked in the following manner: 30 bricks in the bottom row, 29 in the next row, 28 in the row next to it and so on. In how many rows are the 360 bricks placed and how many bricks are there in the top most row?
8. Find the middle term of the sequence formed by all three digit numbers which leave a remainder 3, when divided by 4. Also find the sum of all numbers on both sides of the middle term separately.
9. Ramkali required Rs. 2500 after 12 weeks to send her daughter to school. She saved Rs. 100 in the first week and increased her weekly savings by Rs. 20 every week. Find whether she will be able to send her daughter to school after 12 weeks.
10. An AP 5,12,19,.... Has 50 terms. Find its last term. Hence find the sum of its last 15 terms.
11. The sum of first n terms of three APs are S1,S2 and S3 respectively. The first term of each AP is 1 and their common differences are 1,2,3 respectively. Prove that s1 +s2 = s3.
12. The pth, qth and rth terms of an AP are a,b,c respectively. Show that a(q-r)+b(r-p)+c(p-q) =0.