**ASSIGNMENT NO.-4(MATHEMATICAL INDUCTION)**

**(MATHEMATICS)**

Prove by the principle of mathematical induction that for all :

1. is a multiple of 27.

2. is divisible by 4.

3. is divisible by 7.

4. is divisible by 9.

5.

6. is divisible by 9.

7.

8.

9. whenever is positive and is a positive integer.

10. when divided by 8,the remainder is always 1.