The City School

North Nazimabad Boys Campus

# Subject: Mathematics

# Topic: Number Sequence + Direct and Inverse Variation +Algeriac manipulation and formulae

# Teacher: Ms Sheema Aftab

# Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class 9/Sec: \_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_ Max Marks[20]

Q1: Look at this pattern

1. Write down
2. The 8th line of the pattern. (1)
3. The 13th line of the pattern. (2)
4. The *n*th line of the pattern. (2)
5. Use the pattern to find
6. (2)
7. The integers x and y such that, (2)

Q2: Factorize completely

1. (1)
2. (2)
3. (2)
4. (2)

Q3: When a space satellite orbits the earth , the force F attracting it towards the earth is

inversely proportional to the square of the distance R the center of the earth. Express

F in terms of R and the constant of the variation k. Hence calculate

1. The value of k if F= 50 and when R = 32. (2)
2. The value of R if F = 512. (2)