**The City School**

North Nazimabad Boys Campus

**Practice Questions For Mathematics**

**Class : 9th**

**b)**

**Q2:a) Factorise complete a) 18rc**

**b)**

**Q3: If ‘x’ is directly proportional to and x = 4 when v = 64, find the value of x when v =**

**125 and the value of v when x = 2.**

**Q4: If y is directly proportional to x2 and y = 12 when x = 2, find y when x=5.**

**Q5: It is given that m = :**

1. **Describe the relationship between m and n in words by completing the sentence in the answer space.**

**m is ……………………proportional to the square root of n.**

1. **Calculate n when m = 3.**

**Paper – II**

**Q6: The surface area ‘A’ of a sphere is directly proportional to the square of its diameter**

**‘*d*’, i.e A= k*d2***

1. **Can you suggest the value of k?**
2. **Given that A=38 when *d* = 3 , find the value of k .**
3. **State the relation between A and *d* in another way.**

**Q7: 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. **The value of R if F = 512.**

**Q8: The pressure P of an enclosed gas, held at a constant temperature is inversely**

**proportional to the volume V of the gas . The pressure of certain mass of the gas is**

**500 N/m2when the volume at a fixed temperature is 2 m2. Find the pressure when the**

**volume is 5 m2.**

**Q9: The frequency of the radio waves is inversely proportional to their wavelength. Given**

**That the wavelength is 1.5× 103 meters when the frequency is 2.0× 102 kc/s. Find**

1. **The frequency of the radio waves with a wave length of 480 meters.**
2. **The wave length of radio waves which have a frequency of 960 kc/s.**