CLASS – IX

Maths   **Date:-16/04/2020**

→ Watch the online videos "Number System -Lecture 1 & 2" from Optimum Online E-Learning Platform. After that try to solve the questions given in your assignment.

1. What are irrational numbers? How do they differ from rational numbers? Give examples.

2. Classify the following numbers as rational and irrational. Give reasons to support your answer. (i) $\sqrt{3/81}$ (ii) $\sqrt{361}$ (iii) $\sqrt{21}$ (iv) $\sqrt{1.44}$ (v) $2/3\sqrt{6}$ (vi) 4. 1276 (vii) 22/7 (viii) 1.232332333 … (ix) 3.040040004 … (x) 2.356565656 … (xi) 6.834834 …

3. Let x be a rational number and y be an irrational number. Is x+y necessarily an irrational number? Give an example in support of your answer.

4. Let 'a' be a rational number and b be an irrational number. Is ab necessarily an irrational number? Justify your answer with an example.

5. Is the product of two irrationals always irrational? Justify your answer.

6. Give an example of two irrational numbers
whose
   (i) Difference is an irrational number
   (ii) Difference is a rational number.
   (iii) Sum is an irrational number.
   (iv) Sum is a rational number.
   (v) Product is an irrational number.
   (vi) Product is a rational number.
   (vii) Quotient is an irrational number.
   (viii) Quotient is a rational number.

7.Examine whether the following numbers are rational or irrational.

(i) 3 + √3 (ii) √7 – 2 (iii) √5 × √25 (iv) √7 × √343 (v) √ 13/117 (vi) √8 × √2

8. Insert a rational and an irrational number between 2 and 2.5.

9. How many irrational numbers lie between √2 and√3? Find any three irrational numbers lying between √2 and√3.

10. Find two rational numbers of the form p/q between the numbers 0.2121121112 .... And 0.2020020002 .... .