

NUMBER SYSTEM

Q1. Express $0.\overline{32}$ as a rational number [Ans: $\frac{32}{99}$]

Q2. Express $0.\overline{123}$ as a rational number. [Ans: $\frac{123}{999}$]

Q3. Express $12.\overline{34}$ in the form of $\frac{p}{q}$ [Ans: $\frac{1222}{99}$]

Q4. Write $0.\overline{12}$ in the form of $\frac{p}{q}$ [Ans: $\frac{11}{90}$]

Q5. Express $0.25\overline{62}$ in the form of $\frac{p}{q}$ [Ans: $\frac{2537}{9900}$]

Q6. Show that $\sqrt{2}$ is not a rational number.

Q7. Prove that $\sqrt{3}$ is irrational number

Q8. Find three irrational numbers between 3 and 4. Can you find more?

$$\text{Ans: } 3.101001000100001 \dots$$

$$3.202002000200002 \dots$$

$$3.303003000300003 \dots$$

$$3.404004000400004 \dots$$

$$3.505005000500005 \dots$$

$$3.606006000600006 \dots$$

$$3.707007000700007 \dots$$

$$3.808008000800008 \dots$$

$$3.909009000900009 \dots$$

We can find infinite irrational numbers

Q9. Find an irrational number between 3.2220200200002 and 3.2222020020002

$$3.222101001000100001 \dots$$

$$3.2222020020002 \dots$$

Ans The Irrational Number is

$$3.22210100100010000100001 \dots$$

$$3.2222020020002 \dots$$