

# Mathematics

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(Chapter – 1) (Number Systems)(Exemplar Problems)

(Class – IX)

## Exercise 1.3

### Question 1:

Find which of the variables  $x$ ,  $y$ ,  $z$  and  $u$  represent rational numbers and which irrational numbers:

(i)  $x^2 = 5$

(ii)  $y^2 = 9$

(iii)  $z^2 = .04$

(iv)  $u^2 = \frac{17}{4}$

### Answer 1:

(i)  $x^2 = 5 \Rightarrow x = \pm\sqrt{5}$

So,  $x$  is an irrational number.

(ii)  $y^2 = 9 \Rightarrow y = \pm 3$

So,  $y$  is a rational number.

(iii)  $z^2 = .04 \Rightarrow z = \pm 0.2$

So,  $z$  is a rational number.

(iv)  $u^2 = \frac{17}{4} \Rightarrow u = \pm \frac{\sqrt{17}}{2}$

So,  $u$  is an irrational number.

