Number System Ex 1.4 Q5

Answer :

(i) Given that $x^2 = 5$

Now we have to find the value of x

Since $x^2 = 5$

$\Rightarrow x = \sqrt{5}$

So it x is an irrational number

(ii) Given that $y^2 = 9$

Now we have to find the value of y

$y^2 = 9$

$\Rightarrow y = \sqrt{9}$

$\Rightarrow y = 3$

So y is a rational number

(iii) Given that $z^2 = 0.04$

Now we have to find the value of z

$$\Rightarrow z^2 = \frac{4}{100}$$

$$\Rightarrow z = \sqrt{\frac{4}{100}}$$

$$\Rightarrow z = \frac{2}{10}$$

$$\Rightarrow z = \frac{1}{5}$$

So it is rational number

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

Now we have to find the value of u

$$u^2 = \frac{17}{4}$$

$$\Rightarrow u = \sqrt{\frac{17}{4}}$$

$$\Rightarrow u = \frac{\sqrt{17}}{2}$$

So it is an irrational number

(v) Given that $v^2 = 3$

Now we have to find the value of v

$$v^2 = 3$$

$$\Rightarrow v = \sqrt{3}$$

So it is an irrational number

(vi) Given that $w^2 = 27$

Now we have to find the value of w

$$\Rightarrow w = \sqrt{27}$$

$$\Rightarrow w = \sqrt{3 \times 3 \times 3}$$

$$\Rightarrow w = 3\sqrt{3}$$

So it is an irrational number

(vii) Given that $t^2 = 0.4$

Now we have to find the value of t

$$\Rightarrow t = \sqrt{0.4}$$

$$\Rightarrow t = \sqrt{\frac{4}{10}}$$

$$\Rightarrow t = \frac{2}{\sqrt{10}}$$

So it is an irrational number

********** END **********