

Mathematics

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

(Class – IX)

Exercise 1.1

Write the correct answer in each of the following:

Question 9:

The value of $1.999\dots$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$, is

- (A) $\frac{19}{10}$ (B) $\frac{1999}{1000}$ (C) 2 (D) $\frac{1}{9}$

Answer 9:

(C) 2

Solution:

Let $x = 1.999\dots$

$$\Rightarrow x = 1.\bar{9} \dots\dots\dots(1)$$

Multiplying both sides by 10

$$10x = 19.\bar{9} \dots\dots\dots(2)$$



Subtracting equation (1) from equation (2), we get

$$9x = 18$$

$$\Rightarrow x = 2$$

