RD SHARMA

Solutions

Class 7 Maths

Chapter 6

Ex 6.3

Q1 Express the following numbers in the standard form

(i) 3908.78

(ii) 5,00,00,000

(iii) 3,18,65,00,000

(iv) 846×10^7

(v) 723×10^9

Sol:

(i) $3908.78 = 3.90878 \times 10^3$

Since, the decimal point is moved three places to the left

(ii) $5,00,00,000 = 5,00,00,000.00$

$= 5 \times 10^7$

Since, the decimal point is moved seven places to the left

(iii) $3,18,65,00,000 = 3,18,65,00,000.00$

$= 3.1865 \times 10^9$

Since, the decimal point is moved nine places to the left

(iv) $846 \times 10^7 = 8.46 \times 10^2 \times 10^7$

$= 8.46 \times 10^9$

Since, the decimal point is moved two places to the left

(v) $723 \times 10^9 = 7.23 \times 10^2 \times 10^9$

$= 7.23 \times 10^{11}$

Since, the decimal point is moved two places to the left

Q2. Write the following numbers in the usual form

(i) 4.83×10^7

(ii) 3.21×10^5

(iii) 3.5×10^3

Sol:

(i) $4.83 \times 10^7 = 483 \times 10^{(7-2)}$

$= 483 \times 10^5$

$= 4,83,00,000$

Since, the decimal point is moved two places to the right

(ii) $3.21 \times 10^5 = 321 \times 10^{(5-2)}$

$= 321 \times 10^3$

$= 3,21,000$

Since, the decimal point is moved two places to the right

(ii) $3.5 \times 10^3 = 35 \times 10^{(3-1)}$

$= 35 \times 10^2$

$= 3,500$

Since, the decimal point is moved one place to the right

Q3. Express the numbers appearing in the following statements in the standard form

(i) The distance between the earth and the moon is 384,000,000 metres.

(ii) Diameter of the earth is 1,27,56,000 metres.

(iii) Diameter of the sun is 1,400,000,000 metres.

(iv) The universe is estimated to be about 12,000,000,000 years old.

Sol:

(i) The distance between the earth and the moon is 3.84×10^8 metres.

Since, the decimal point is moved eight places to the left

(ii) Diameter of the earth is 1.2756×10^7 metres.

Since, the decimal point is moved seven places to the left

(ii) Diameter of the sun is 1.4×10^9 metres.

Since, the decimal point is moved nine places to the left

(iv) The universe is estimated to be about 1.2×10^{10} years old.

Since, the decimal point is moved ten places to the left