



Playing with Numbers Ex 2.10 Q4

**Answer :**

We have to find the prime factorisation of 35, 56, and 91.

Prime factorisation of 35 =  $5 \times 7$

Prime factorisation of 56 =  $2 \times 2 \times 2 \times 7$

Prime factorisation of 91 =  $7 \times 13$

$\therefore$  Required LCM =  $2 \times 2 \times 2 \times 5 \times 7 \times 13 = 3,640$

Thus, 3,640 is the smallest number exactly divisible by 35, 56, and 91.

To get the remainder as 7:

Smallest number =  $3,640 + 7 = 3,647$

Thus, the required number is 3,647.

Playing with Numbers Ex 2.10 Q5

**Answer :**

We have to find the LCM of 32 and 36.

Prime factorisation of 32 =  $2 \times 2 \times 2 \times 2 \times 2$

Prime factorisation of 36 =  $2 \times 2 \times 3 \times 3$

Required LCM =  $2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 288$

$\therefore$  Minimum number of books required = LCM of 32 and 36 = 288 books

Playing with Numbers Ex 2.10 Q6

**Answer :**

We have to find the LCM of 80 cm, 85 cm, and 90 cm.

Prime factorisation of 80 =  $2 \times 2 \times 2 \times 2 \times 5$

Prime factorisation of 85 =  $5 \times 17$

Prime factorisation of 90 =  $2 \times 3 \times 3 \times 5$

$\therefore$  Required LCM =  $2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 17 = 12,240$

$\therefore$  Required minimum distance = LCM of 80 cm, 85 cm, and 90 cm

= 12,240 cm

= 122 m 40 cm (since 1 m = 100 cm)

\*\*\*\*\* END \*\*\*\*\*