

## Playing with Numbers Ex 2.10 Q1

## Answer:

We have to find prime factorisation of 24, 36, and 54.

Prime factorisation of  $24 = 2 \times 2 \times 2 \times 3$ Prime factorisation of  $36 = 2 \times 2 \times 3 \times 3$ Prime factorisation of  $54 = 2 \times 3 \times 3 \times 3$  $\therefore$  Required LCM =  $2 \times 2 \times 2 \times 3 \times 3 \times 3 = 216$ 

Thus, 216 is the smallest number exactly divisible by 24, 36, and 54.

To get the remainder as 5:

Smallest number = 216 + 5 = 221

Thus, the required number is 221.

Playing with Numbers Ex 2.10 Q2

## Answer:

We have to find prime factorisation of 33 and 39.

Prime factorisation of 33 = 3 × 11

Prime factorisation of 39 = 3 × 13

∴ Required LCM = 3 × 11 × 13 = 429

Thus, 429 is the smallest number exactly divisible by 33 and 39.

To get the remainder as 5:

Smallest number = 429 + 5 = 434

Thus, the required number is 434.

Playing with Numbers Ex 2.10 Q3

## Answer:

To find the required least number, we have to find the LCM of the numbers from 1 to 10. We know that 2, 3, 5, and 7 are prime number.

Prime factorisation of  $4 = 2 \times 2$ Prime factorisation of  $6 = 2 \times 3$ Prime factorisation of  $8 = 2 \times 2 \times 2$ Prime factorisation of  $9 = 3 \times 3$ Prime factorisation of  $10 = 2 \times 5$ 

: Required least number =  $2 \times 2 \times 2 \times 3 \times 3 \times 5 \times 7 = 2,520$ 

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