EX:-8 (c)

(i) 8, 12 and 24

A→ We get,

L.C.M = 4×3×2

= 24

Hence, L.C.M. of 8, 12 and 24 = 24

ii) 10, 15 and 20

We get,

L.C.M. = 2×2×3×5

= 60

Hence, L.C.M. of 10, 15 and 20 = 60

iii) 3, 6, 9 and 12

A→ We get,

L.C.M. = 3×2×3×2 = 36

Hence, L.C.M. of 10, 15 and 20 = 60.

2.i) 18, 24 and 96

By using Prime factor method, L.C.M.

of 18, 24 and 96 are given below

Prime factors of 18 = 2 × 3 × 3

Prime factors of 24 = 2 × 2 × 2 × 3

Prime factors of 96 = 2 × 2 × 2 × 2 × 2 × 3

∴ L.C.M. = 2 × 2 × 2 × 2 × 2 × 3 × 3 = 288

~~Hence, L.C.M. of 18, 15 and 20 = 60~~

Hence, L.C.M. of 18, 24 and 96 = 288

(5) Product of two = 11200 and H.C.F. = 40

We know that,

Product of H.C.M.

ii) 100, 150 and 200

A→ By using Prime factor method of 100, 150 and 200 are given below.

Prime factors of 100 = 2 × 2 × 5 × 5

Prime factor of 150 = 2 × 5 × 5 × 3

Prime factor of 200 = 2 × 2 × 2 × 5 × 5

~~∴ Hence, L.C.M. of 18, 24 and 96~~

∴ L.C.M. = 2 × 2 × 2 × 5 × 5 × 3 = 600

Hence, L.C.M. of 100, 150 and 200 = 600.

iii) ~~x~~ 14, 21 and 98

A) By using prime factor method of 14, 21 and 98 are given below.

Prime factors of 100 = 2 x 2 x 5 x 5
Prime factors of 150 = 2 x 5 x 5 x 3
Prime factors of 400 = 2 x 2 x 2 x 5 x 5

Prime factors ~~method~~ of 14 = 2 x 7
Prime factors of 21 = 3 x 7
Prime factors of 98 = 2 x 7 x 7
∴ L.C.M. = 7 x 7 x 3 x 2 = 294
Hence, L.C.M of 14, 21 and 98 = 294

iv) 22, 121 and 33

A) By using prime factor method of 22, 121 and 33 are given below.

Prime factors of 22 = 2 x 11
Prime factors of 121 = 11 x 11
Prime factors of 33 = 11 x 3
∴ L.C.M. = 2 x 11 x 11 x 3 = 726
Hence, L.C.M. of 22, 121 and 33 = 726

v) 34, 85 and 51

A) By using prime factor method of 34, 85 and 51

Prime factors of 34 = 2 x 17
Prime factors of 85 = 5 x 17
Prime factors of 51 = 3 x 17
L.C.M. = 17 x 2 x 5 x 3 = 510
Hence, L.C.M. of 34, 85 and 51 = 510

3. The solution :- HCF = 50 / LCM = 300

one Nuber = 150

We know that, Product of H.C.F. and L.C.M. of two numbers is equal to Product of those two number

50 X 300 = 150 X other number

15000 / 150 = other number

100 = other number

Hence, the other number is 100.

④ The solution :- of Product of two number

432 and L.C.M. = 72

We know that,

Product of H.C.F. and L.C.M. of two numbers is equal to Product of those two numbers

Now, to find H.C.F.

HCF X 72 = 432

HCF = 432 / 72

HCF = 6 / Hence, H.C.F. = 6

(5) Solution :- Given products of two numbers 19200 and HCF = 40

We know that,

Product of H.C.F and L.C.M. of two numbers is equal to Product of those two numbers

Now, to find L.C.M.

$40 \times L.C.M. = 19200$

$L.C.M. = 19200/40$

$L.C.M. = 480$

Hence, $L.C.M. = 480$

(6) Solution :-

The given numbers L.C.M. will be the least number which exactly divisible 12, 15, 18, 24 and 36 and leaves no remainder.

$L.C.M. = 2 \times 2 \times 2 \times 3 \times 5 = 360$

Hence, smallest required number = 360.

(7) First, let us find out the L.C.M of 12, 18, 24, 32, and 40

L.C.M. = 2×2×2×2×2×3×3×5

= 1440

This can be written as

= 1439+1

Hence, 1439 is the ~~smallest~~ smallest number which, increased by one is exactly divisible the given numbers.

8.) Solution :- First let us solve for L.C.M. of 18, 36, 32 and 27

L.C.M. = 2×2×2×2×2×3×3×3 = 864

This can be written as
= 867 - 3

Hence, 867 is the smallest number which, when decreased by 3 is exactly divisible by the given numbers.