



Exercise 1A

Questions 5:

(i) By prime factorization, we get

2	144
2	72
2	36
2	18
3	9
3	3
	1

2	198
3	99
3	33
11	11
	1

$$\therefore 144 = 2 \times 2 \times 2 \times 2 \times 3 \times 3 = 2^4 \times 3^2$$

$$\therefore 198 = 2 \times 3^2 \times 11$$

$$\therefore \text{H.C.F. of } (144, 198) = 2 \times 3^2 = 2 \times 3 \times 3 = 18$$

$$\begin{aligned} \text{L.C.M of } 144 \text{ and } 198 &= 2^4 \times 3^2 \times 11 \\ &= 16 \times 9 \times 11 = 1584 \end{aligned}$$

(ii) By prime factorization. We get

2	396
2	198
3	99
3	33
11	11
	1

2	1080
2	540
2	270
3	135
3	45
3	15
5	5
	1

$$\therefore 396 = 2^2 \times 3^2 \times 11$$

$$\therefore 1080 = 2^3 \times 3^3 \times 5$$

$$\therefore \text{H.C.F. of } (396, 1080) = 2^2 \times 3^2 = 4 \times 9 = 36$$

$$\text{L.C.M of } 396 \text{ and } 1080 = 2^3 \times 3^3 \times 5 \times 11 = 11880$$

(iii) By prime factorization, we get

2	1152
2	576
2	288
2	144
2	72
2	36
2	18
3	9
3	3
	1

2	1664
2	832
2	416
2	208
2	104
2	52
2	26
13	13
	1

$$\therefore 1152 = 2^7 \times 3^2$$

$$\therefore 1664 = 2^7 \times 13$$

$$\therefore \text{H.C.F. of } (1152, 1664) = 2^7 = 128$$

$$\text{L.C.M of } 1152 \text{ and } 1664 = (2^3 \times 3^3 \times 13) = 128 \times 9 \times 13 = 14976$$

***** END *****