

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	

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

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

: H.C.F. of
$$(144,198) = 2 \times 3^2 = 2 \times 3 \times 3 = 18$$

L.C.M of 144 and
$$198 = 2^4 \times 3^2 = 11$$

= $16 \times 9 \times 11 = 1584$

(ii) By prime factorization. We get

2	396
2	198
3	99
3	33
11	11
	1

_ :	2	1080
- 2	2	540
_ :	2	270
3	3	135
	3	45
3	3	15
į	5	5
		1

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

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

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

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

(iii) By prime factorization, we get

2	1152	2	1664
2	576	2	832
2	288	2	416
2	144	2	208
2	72	2	104
2	36	2	52
2	18	2	26
3	9	13	13
3	3		1
	1		

 $^{1152 = 2^7 \}times 3^2$

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

******* END *******

 $^{1664 = 2^7 \}times 13$

[:] H.C.F. of $(1152, 1664) = 2^7 = 128$