8. LCM of 18, 36, 32, 27 =

2	18	36	32	27
3	9	18	16	27
3	3	6	16	9
2	1	2	16	3
	1	1	8	3

LCM = 2 × 3 × 3 × 2 × 8 × 3
= 864

864 + 3 = 867

So the required answer is 867.

REVISION EXERCISE (CH-8)

6. (i) LCM = 42

Therefore the ~~HCM~~ smallest no. divisible by 28 and 42 is 42

(ii) HCF = 28

And the largest no. ~~divisible~~ that can divide 28 and 42 completly.

1. (i) 108, 288 and 420

2	108, 288, 420
2	54, 144, 210
3	27, 72, 105
3	9, 24, 35
	3, 8, 35

HCF = 2 × 2 × 3 × 3 = 36

(ii) 36, 54 and 138

2	36, 54, 138
3	18, 27, 69
	6, 9, 23

HCF = 2 × 3 = 6

2. (i) 72, 80 and 252

2	72, 80, 252
2	36, 40, 126
2	18, 20, 63
3	9, 10, 63
3	3, 10, 21
	1, 10, 7

LCM = 2 × 2 × 2 × 3 × 3 × 10 × 7
$= 2^3 \times 3^2 \times 10 \times 7$
= 5040

(ii) 48, 66 and 120

2	48, 66, 120
3	24, 33, 60
2	8, 11, 20
2	4, 11, 10
	2, 11, 5

LCM = 2 × 2 × 2 × 2 × 3 × 11 × 5
$= 2^4 \times 3 \times 11 \times 5$
= 2640

3. (i) H.C.F of two prime numbers is 1. (T)

FACTORS OF 4 = 1, 2, 4
FACTORS OF 9 = 1, 3, 9
∴ HCF = 1

(ii) H.C.F of two coprime numbers is 1. (T)

FACTORS OF 14 = 1, 2, 7, 14 ∴ HCF = 1
FACTORS OF 19 = 1, 19

(iii) L.C.M. of two prime no. is equal to their product. (T)

LCM OF 3 AND 15

3 = 3, 6, 9, 12, (15) ∴ LCM = 15 = 3×5
15 = 5, 10, (15), 20, 25

(iv) L.C.M of Two coprime numbers is equal to their product. (T)

LCM OF 9 AND 11

9 = 9, 18, 36, 27, 45, 54, 63, 72, 81, 90, (99)
11 = 11, 22, 33, 44, 55, 66, 77, 88, (99)

∴ LCM = 99 = 11×9

4. Product of 2 no. = 12096

HCF = 36

LCM = Product of 2 no. ÷ HCF = 12096 ÷ 36 = 336

5. HCF × LCM = 1152

One No. = 48

Second No. = 1152 ÷ 48 = 24

7. LCM of 140 & 168 =

2	140, 168
2	70, 84
7	35, 42
	5, 6

LCM = 2 × 2 × 7 × 5 × 6 = 840

Product of 2 no. is = ~~23520~~ 140 × 168 = 23520

LCM = 840

HCF = 23520 ÷ 840 = **28**

8. HCF of 108 & 450

2	108, 450
3	54, 225
3	18, 75
	6, 25

HCF = 2 × 3 × 3 = 18

Product of 2 no. is = 108 × 450

LCM = $\frac{\text{Product of 2 no.}}{\text{their HCF}} = \frac{\overset{6}{\cancel{108}} \times 450}{\cancel{18}} =$ **2700**