1. 256, 384

2	256
2	128
2	64
2	32
2	16
2	8
2	4
	2

2	384
2	192
2	96
2	48
2	24
2	12
2	6
	3

P. F of 256 = 2^8

P. F of 384 = $2^7 \times 3^1$

GCF (256, 384) = $2^7 \times 3^0$ = 2^7 = 128

LCM (256, 384) = $2^8 \times 3^1$ = 256 × 3 = 768

2. (96, 64)

2	96
2	48
2	24
2	12
2	6
2	3
	1

→ X

2	64
2	32
2	16
2	8
2	4
	2

P.F. of 96 : $2^6 \times 3$

P.F. of 64 : $2^6 \times 3^0$ ✓

GCF of (96, 64) : $2^6 \times 3^0$ $2^5 \times 3^0 = 32$

LCM of (96, 64) : $2^6 \times 3$ $= 192$

$2^5 \times 3$

Always verify your answers. The product of PFs should give the original numbers.

Also, check LCM, GCDs by dividing.

3. 50, 75

$a = p^3 q^5 r^2 s^5 | 7$

$b = m^7 p^9 r^5 t^4$

$a = 3^5$

$b = 7^9$

2	50
5	25
	5

3	75
5	25
	5

P.F of 50 : 2×5^2 ✓ $= 2^1 \times 5^2 \times 3^0$

P.F. of 75 : 3×5^2 ✓ $= 3^1 \times 5^2 \times 2^0$

GCF of (50, 75) : 2×5^2 ✗ $= 2^0 \times 3^0 \times 5^2 = 25$

LCM of (50, 75) : 3×5^2 ✗ $= 2^1 \times 3^1 \times 5^2 = 150$

Verify your answers always!

4. 2025, 162

3	2025	3	162
3	675	3	54
3	225	3	18
3	75	3	6
5	25		2
	5		

P.F. of 2025: $3^4 \times 5^2$ ✓

P.F. of 162: $3^4 \times 2$ ✓

GCF of (2025, 162) = $3^4 \times 2^0 \times 5^0$ ✓ = 81

LCM " " = $3^4 \times 5^2 \times 2^0$ X $3^4 \times 5^2 \times 2 = 4050$

(5) 576, 1024

576
2 | 288
2 | 144
2 | 72
2 | 36
2 | 18
3 | 9
3

1024
2 | 512
2 | 256
2 | 128
2 | 64
2 | 32
2 | 16
2 | 8
2 | 4
2

P.F. of 576: $2^6 \times 3^2$ ✓

P.F. of 1024: 2^{10} ✓

GCF of (576, 1024): $2^6 \times 3^0$ ✓ = 64

LCM of (576, 1024): $2^{10} \times 3^2$ ✓ = 9216

⑥ 256, 384, 1024

(did this skip page 1, page 5)

Write clearly!

P.F. of $256 : 2^8$

P.F. of $384 : 2^7 \times 3^1$

P.F. of $1024 : 2^{10}$

GCD $= 2^7 \times 3^0$ ✓ = ?

LCM $= 2^{10} \times 3^1$ ✓ = ?

(7) 2025, 162, 450

2025, 162's this is in page 4

P.F of 2025 = $3^4 \times 5^2 \times 2^0$

P.F. of 162 = $3^4 \times 2$

P.F. of 450 = $2 \times 3^2 \times 5^2$

GCF = $2^0 \times 3^2 \times 5^0$ ✓ = ?

LCM = $2 \times 3^4 \times 5^2$ ✓ = ?

2 | 450
3 | 225
3 | 75
5 | 25
5 | 5

(8) 96, 384, 162

(I got these from pages 1, 2 4, or 7)

P.F. of $162 = 3^4 \times 2$

P.F. of $96 = 2^5 \times 3^1$ $\neq$ $2^5 \times 3$

P.F. of $384 = 2^7 \times 3^1$

GCF $= 2 \times 3^1$ ✓ $= ?$

LCM $= 2^7 \times 3^4$ ✓ $= ?$