

$$4 \text{ (iv)} \quad 768 = 2^8 \times 3$$

2	768
2	384
2	192
2	96
2	48
2	24
2	12
2	6
	3

$$\begin{aligned}
 5 \text{ (i)} \quad & \frac{(2^5)^2 \times 7^3}{8^3 \times 7} \\
 &= \frac{2^{10} \times 7^3}{(2^3)^3 \times 7} \\
 &= \frac{2^{10} \times 7^3}{2^6 \times 7} \\
 &= 2^{10-6} \times 7^{3-1} \\
 &= 2^4 \times 7^2
 \end{aligned}$$

$$\begin{aligned}
 5 \text{ (ii)} \quad & \frac{3^5 \times 10^5 \times 25}{5^7 \times 6^5} \\
 &= \frac{\cancel{3^5} \times \cancel{2^5} \times 5^5 \times 5^2}{5^7 \times \cancel{2^5} \times \cancel{3^5}} \\
 &= \frac{5^{5+2}}{5^7} \\
 &= \frac{5^7}{5^7} \\
 &= 1
 \end{aligned}$$