

4.i $729 = 3^2 \times 3^2 \times 3^2$

$$\begin{aligned} \sqrt{729} &= \sqrt{3^2 \times 3^2 \times 3^2} \\ &= 3 \times 3 \times 3 \\ &= 27 \end{aligned}$$

(ii) $400 = 2^2 \times 2^2 \times 5^2$

$$\begin{aligned} \sqrt{400} &= \sqrt{2^2 \times 2^2 \times 5^2} \\ &= 2 \times 2 \times 5 \\ &= 20 \end{aligned}$$

(iii) $\sqrt{1764}$

$$\begin{aligned} &= \sqrt{2^2 \times 3^2 \times 7^2} \\ &= 2 \times 3 \times 7 \\ &= 42 \end{aligned}$$

7	1764
7	252
3	36
3	12
2	4
	2

(iv) $\sqrt{4096}$

$$\begin{aligned} &= \sqrt{2^2 \times 2^2 \times 2^2 \times 2^2 \times 2^2 \times 2^2} \\ &= 2 \times 2 \times 2 \times 2 \times 2 \times 2 \\ &= 64 \end{aligned}$$

2	4096
2	2048
2	1024
2	512
2	256
2	128
2	64
2	32
2	16
2	8
2	4
2	2