③ c) $\sqrt[4]{\frac{256}{625}}$ Radicand = $\frac{256}{625}$

$$\frac{\sqrt[4]{256}}{\sqrt[4]{625}} = \frac{\sqrt[4]{2\times2\times2\times2\times2\times2\times2\times2}}{\sqrt[4]{5\times5\times5\times5}}$$

$$= \frac{2\times2}{5} = \frac{4}{5}$$

(b) b) $5\sqrt[3]{48}$

$5\sqrt[3]{2\times2\times2\times2\times3}$

$5\cdot2\sqrt[3]{2\times3}$

$\boxed{10\sqrt[3]{6}}$

(14) Surface Area of a cube is 37800cm^2. What is the length?

① Find Area

$$A = \frac{37800}{6}$$

$$A = 6300\text{cm}^2$$

$A = 6300$ $l = ?$

② Find length

square root → circle pairs

$$\sqrt{6300} = \sqrt{2\times2\times3\times3\times5\times5\times7}$$

$$= 2\times3\times5\sqrt{7}$$

$$= 30\sqrt{7}$$

$l = 30\sqrt{7}\text{cm}$

Square:
$A = l \times w$ (sides are same)

Cube:
$V = l \times w \times h$ (sides are same)
$SA = 6(l \times w)$ (sides are same)

⑥ Given:

Surface Area $= 13824\ m^2$

Volume $= ?$

① Find Area:

$$Area = \frac{S.A.}{6}$$

$$Area = \frac{13824}{6}$$

$$A = 2304\ m^2$$

② Find side length

$\sqrt{2304} = ?$

$2304 \rightarrow 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 3 \times 3$

$= 2 \times 2 \times 2 \times 2 \times 3$

$= 48\ m$

length $= 48m$

③ $V = l \times w \times h$ (All sides are the same)

$V = 48 \times 48 \times 48$

$V = 110\,592\ m^3$

$A = l \times w$

$V = l \times w \times h$

Given surface area = 17496 units^2

① Find Area:

$A = \frac{17496}{6}$

$A = 2916$ units^2.

② Find length

$\sqrt{2916} = ?$

$2916 \rightarrow 2 \times 2 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$

$= 2 \times 3 \times 3 \times 3$

$= 54$

length = 54 units

③ $V = l \times w \times h$

$V = 54 \times 54 \times 54$

$V = 157\,464$ units^3