

$$3 \text{ (vii)} \quad \frac{\sqrt{15}}{\sqrt{3}}$$

$$= \sqrt{\frac{15}{3}}$$

$$= \sqrt{\frac{5}{1}}$$

False. \because numerator is not an integer

$$4 \text{ (f)} \quad \sqrt{196}$$

$$= \sqrt{2^2 \times 7^2}$$

$$= 2 \times 7$$

$= 14$
rational

$$\text{(ii)} \quad \sqrt[3]{18}$$

$$= \sqrt[3]{2 \times 3^2}$$

irrational

$$\text{(iii)} \quad \sqrt{\frac{9}{27 \times 3}}$$

$$= \sqrt{\frac{1}{3}}$$

irrational

$$\text{(iv)} \quad \frac{\sqrt{28}}{\sqrt{343}}$$

$$= \sqrt{\frac{28 \times 4}{343 \times 49}}$$

$$= \sqrt{\frac{2^2}{7^2}}$$

$$= \frac{2}{7}$$

rational

$$\text{(x)} \quad 1.010010001\dots$$

irrational
 \because non ter.
non rep.

$$\text{(v)} \quad -\sqrt{0.4}$$

$$= -\sqrt{\frac{4}{10 \times 5}}$$

$$= -\sqrt{\frac{2}{5}}$$

irrational

$$\text{(vi)} \quad \frac{\sqrt{12}}{\sqrt{75}}$$

$$= \sqrt{\frac{12 \times 4}{75 \times 25}}$$

$$= \sqrt{\frac{2^2}{5^2}}$$

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

rational

$$\text{(vii)} \quad 0.5918$$

rational

$$\text{(viii)} \quad (1+\sqrt{5}) - (4+\sqrt{5})$$

$$= 1 + \sqrt{5} - 4 - \sqrt{5}$$

$$= -3$$

rational

$$\text{(ix)} \quad 10.124124\dots$$

rational
non-terminating
repeating