

[2] P33

$$(1) \frac{1}{\sqrt{2}} = \frac{\sqrt{2}}{\sqrt{2} \times \sqrt{2}} = \frac{\sqrt{2}}{2}$$

$$= \frac{1.4142}{2}$$

$$= \underline{0.7071}$$

$$(2) \frac{1}{\sqrt{3}} = \frac{\sqrt{3}}{\sqrt{3} \times \sqrt{3}} = \frac{\sqrt{3}}{3}$$

$$= \frac{1.7321}{3}$$

$$3 \overline{) 1.7321}$$

$$\begin{array}{r} 0.57736 \\ 15 \\ \underline{23} \\ 21 \\ \underline{22} \\ 21 \\ \underline{11} \\ 9 \\ \underline{20} \end{array}$$

$$= 0.57736 \dots$$

$$\doteq \underline{0.5774}$$

$$(3) \frac{\sqrt{3}}{\sqrt{3}-1} = \frac{\sqrt{3}(\sqrt{3}+1)}{(\sqrt{3}-1)(\sqrt{3}+1)}$$

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

$$= \frac{3 + \sqrt{3}}{2}$$

$$= \frac{3}{2} + \frac{\sqrt{3}}{2}$$

$$= \frac{3}{2} + \frac{1.7321}{2}$$

$$2 \overline{) 1.7321}$$

$$\begin{array}{r} 0.86605 \\ 16 \\ \underline{13} \\ 12 \\ \underline{12} \\ 12 \\ \underline{12} \\ 010 \end{array}$$

$$= \frac{3}{2} + 0.86605 \dots$$

$$= 1.5 + 0.86605 \dots$$

$$= 2.36605 \dots$$

$$= \underline{2.3661}$$