

$$(e) (231.78)_{10} = (?)_3$$

$$\begin{array}{r} 3 \overline{)231} \\ \underline{3} \\ 3 \\ \underline{3} \\ 3 \\ \underline{3} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 0 \\ 2 \\ 1 \\ 2 \\ 2 \end{array} \quad \begin{array}{r} .78 \\ \times 3 \\ \hline 2.34 \\ \times 3 \\ \hline 1.02 \\ \times 3 \\ \hline 0.06 \\ \times 3 \\ \hline 0.18 \end{array}$$

$$= (22120.2100\dots)_3$$

$$(f) (1023.25)_{10} = (?)_3$$

$$\begin{array}{r} 3 \overline{)1023} \\ \underline{3} \\ 3 \\ \underline{3} \\ 3 \\ \underline{3} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 0 \\ 2 \\ 2 \\ 1 \\ 0 \\ 1 \end{array} \quad \begin{array}{r} .25 \\ \times 3 \\ \hline 0.75 \\ \times 3 \\ \hline 2.25 \end{array}$$

$$= (11101220.\overline{02})_3$$

$$(2) \text{ Base } 5$$

$$(a) (245)_{10} = (?)_5$$

$$\begin{array}{r} 5 \overline{)245} \\ \underline{5} \\ 5 \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 0 \\ 4 \\ 4 \\ 1 \end{array}$$

$$= (1440)_5$$

$$(b) (461)_{10} = (?)_5$$

$$\begin{array}{r} 5 \overline{)461} \\ \underline{5} \\ 5 \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 1 \\ 2 \\ 3 \\ 3 \end{array}$$

$$= (3321)_5$$

$$(c) (76.5)_{10} = (?)_5$$

$$\begin{array}{r} 5 \overline{)76} \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 1 \\ 0 \\ 3 \end{array} \quad \begin{array}{r} .5 \\ \times 5 \\ \hline 2.5 \end{array}$$

$$= (301.\overline{2})_5$$

$$(d) (46.45)_{10} = (?)_5$$

$$\begin{array}{r} 5 \overline{)46} \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 1 \\ 4 \\ 1 \end{array} \quad \begin{array}{r} .45 \\ \times 5 \\ \hline 2.25 \\ \times 5 \\ \hline 1.25 \end{array}$$

$$= (141.2\overline{1})_5$$

$$(e) (231.78)_{10} = (?)_5$$

$$\begin{array}{r} 5 \overline{)231} \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 1 \\ 1 \\ 4 \\ 1 \end{array} \quad \begin{array}{r} .78 \\ \times 5 \\ \hline 3.90 \\ \times 5 \\ \hline 4.50 \\ \times 5 \\ \hline 2.50 \end{array}$$

$$= (1411.34\overline{2})_5$$

$$(f) (1023.25)_{10} = (?)_5$$

$$\begin{array}{r} 5 \overline{)1023} \\ \underline{5} \\ 5 \\ \underline{5} \\ 5 \\ \underline{5} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 3 \\ 4 \\ 0 \\ 3 \\ 1 \end{array} \quad \begin{array}{r} .25 \\ \times 5 \\ \hline 1.25 \end{array}$$

$$= (13043.\overline{1})_5$$

$$(3) \text{ Base } 8$$

$$(a) (245)_{10} = (?)_8$$

$$\begin{array}{r} 8 \overline{)245} \\ \underline{8} \\ 8 \\ \underline{8} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 5 \\ 6 \\ 3 \end{array}$$

$$= (365)_8$$

$$(b) (461)_{10} = (?)_8$$

$$\begin{array}{r} 8 \overline{)461} \\ \underline{8} \\ 8 \\ \underline{8} \\ 0 \end{array} \quad \begin{array}{c} \uparrow \\ 5 \\ 1 \\ 7 \end{array}$$

$$= (715)_8$$