

$$1) S = \{ \$, !, \$, !, \#, !, \# \}$$

$$! = 4/7$$

$$\$ = 1/7$$

$$\# = 2/7$$

$$!(4/7)$$

$$\#(2/7), \$(1/7)$$

$$\#(2/7)$$

$$\$(1/7)$$

$$\begin{aligned} ! &\rightarrow 0 \\ \# &\rightarrow 10 \\ \$ &\rightarrow 11 \end{aligned}$$

$$2) S = \{ \$, !, \$, *, !, *, \#, \$ \}$$

$$\$ = 3/8$$

$$! = 2/8$$

$$* = 2/8$$

$$\# = 1/8$$

$$\$(3/8)$$

$$!(2/8), *(2/8), \#(1/8)$$

$$!(2/8)$$

$$*(2/8), \#(1/8)$$

$$*(2/8)$$

$$\#(1/8)$$

$$\begin{aligned} \$ &= 0 \\ ! &= 10 \\ * &= 110 \\ \# &= 111 \end{aligned}$$

$$3) S = \{ \cancel{*}, !, \#, \$, \$, \#, !, *, !, *, \# \}$$

$$* = 3/11$$

$$! = 3/11$$

$$\$ = 2/11$$

$$\# = 3/11$$

$$\begin{array}{c} 0 \downarrow \\ * (3/11) \end{array}$$

$$\begin{array}{c} 1 \swarrow \\ ! (3/11), \# (3/11), \$ (2/11) \end{array}$$

$$\begin{array}{c} 0 \checkmark \\ ! (3/11) \end{array}$$

$$\begin{array}{c} 1 \searrow \\ \# (3/11), \$ (2/11) \\ 0 \checkmark \quad 1 \searrow \\ \# (3/11) \quad \$ (2/11) \end{array}$$

$$\begin{array}{l} * \\ \cancel{*} = 0 \\ ! = 10 \\ \# \cancel{\$} = 110 \\ \$ = 111 \end{array}$$