

113. When messages are sent via Morse code, errors can occur in transmission. In particular, Morse code uses a series of "dots" and "dashes" which are known to occur in the proportion of 3:4; for every three dots, there are four dashes. Suppose there is interference on the transmission line and with probability $1/5$ a dot is mistakenly received for a dash, and vice versa. If a dot was received (on the line with interference), what is the probability a dot was actually sent?