

L1

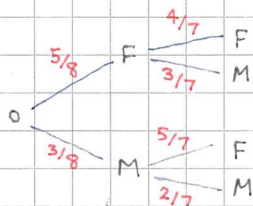
(1)

16 1 $0.128 + 0.62 \neq 1$

2 $P_r(L) = 0.35$
 $P_r(L \cap S) = 0.42$
 $P_r(L \cap S) \neq P(L)$

3 $P_r(7) = 0.32$
 $P_r(6 \cup 7) = 0.27$
 $P_r(6 \cup 7) \neq P(7)$

4 $P_r(TV \cap DW) = 0.41$ is too low!

19 1 Let F be the event that a Fantale is drawn.
Let M = a Mintie is drawn.

2 $P_r(F, F) = \frac{5}{8} \times \frac{4}{7} = \underline{\underline{\frac{20}{56}}}$

3 $P_r(M, M) = \frac{3}{8} \times \frac{2}{7} = \underline{\underline{\frac{6}{56}}}$

4 $P_r(F, M) + P_r(M, F) = \frac{5}{8} \times \frac{3}{7} + \frac{3}{8} \times \frac{5}{7} = \frac{15}{56} + \frac{15}{56} = \underline{\underline{\frac{30}{56}}}$

$$\begin{aligned} P(\text{circuit functions}) &= 1 - P(\text{circuit fails}) \\ &= 1 - [P((\bar{E}_1 \cap \bar{E}_2) \cap (\bar{E}_3 \cup \bar{E}_4))] \\ &= 1 - [P(\bar{E}_1 \cap \bar{E}_2 \cap \bar{E}_3) \cup (\bar{E}_1 \cap \bar{E}_2 \cap \bar{E}_4)] \\ &= 1 - [P(\bar{E}_1 \bar{E}_2 \bar{E}_3) + P(\bar{E}_1 \bar{E}_2 \bar{E}_4) - P(\bar{E}_1 \bar{E}_2 \bar{E}_3 \bar{E}_4)] \\ &= 1 - [(1-p)^3 + (1-p)^3 - (1-p)^4] \\ &= 1 - [2(1-p)^3 - (1-p)^4] \\ &= \underline{\underline{1 - 2(1-p)^3 + (1-p)^4}} \end{aligned}$$