

Solutions

2.1 Without replacement, $P(RR)=3/5 \times 2/4=0.3$.

2.2 A single blue draw has probability $2/(3+2)=0.4$.

2.3 Add the two orders: $3/5 \times 2/4 + 2/5 \times 3/4 = 0.6$.

2.4 $P(A|B)=P(A \cap B)/P(B)=0.12/0.3=0.4$.

3.1 False. A fair die shows 1 with probability $1/6$ and 2 with probability $1/6$. The events cannot occur together, so their joint probability is zero. Independence would require $1/36$.

Local review guidance: show the chosen method; give the checked result; explain the condition or failed shortcut. This is authored classroom guidance.