**Self-assessment answers: 22 Probability**

**1.** (a) P(*T*2 = *R*|*T*1 = *R*) = 

(b) P(*T*1 = *T*2) = P(*T*1 = *T*2 = *R*) + P(*T*1 = *T*2 = *G*) = 

(c) P(*T*2 = *T*1|*T*2 = *R*) = *[7 marks]*

**2.** (a) 6

(b) P(R|S) = *[7 marks]*

**3.** (a) P(*A* ∩ *B*′) = P(*A*|*B*′) × P(*B*′) = 

⇒ P(*A* ∩ *B*) = P(*A*) – P(*A* ∩ *B*′) = 

(b) P(*B*|*A*′) = 

(c) Yes: P(*A* ∩ *B*) = P(*A*) × P(*B*) *[9 marks]*

**4.** P(*B*|*L*) = *[7 marks]*