

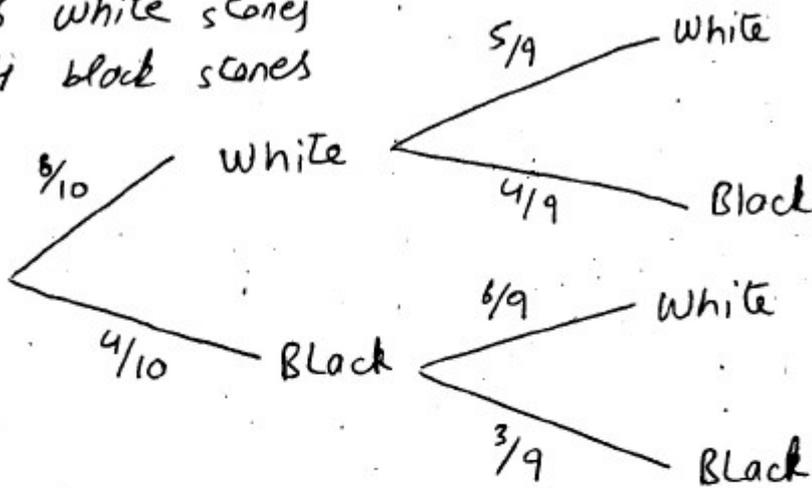
ANSWERS

CONDITIONAL PROBABILITY

Q1-

①

6 white stones
4 black stones



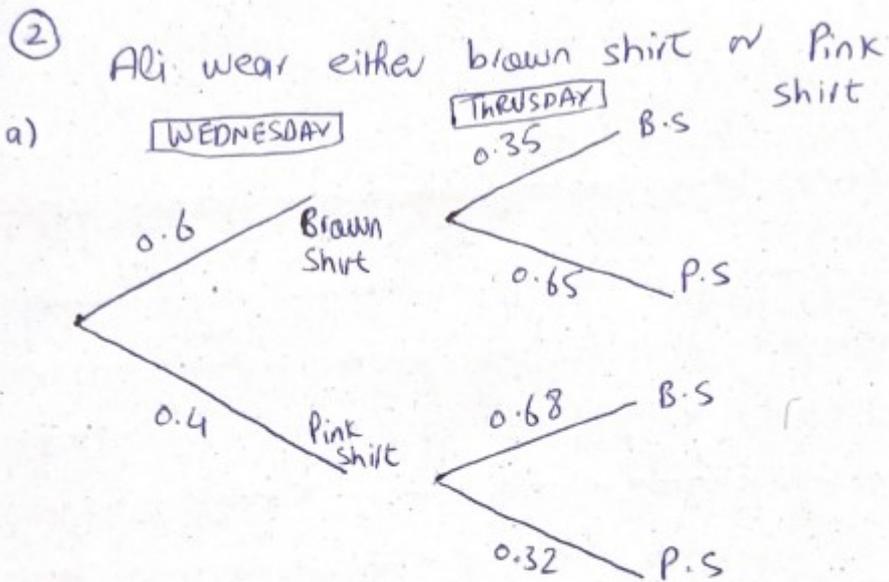
b)

$$P(W, W) = \frac{6}{10} \times \frac{5}{9} = \frac{30}{90}$$

$$P(B, B) = \frac{4}{10} \times \frac{3}{9} = \frac{12}{90}$$

$$\frac{30}{90} + \frac{12}{90} = \frac{42}{90} \quad \text{OR} \quad \frac{21}{45}$$

Q2-



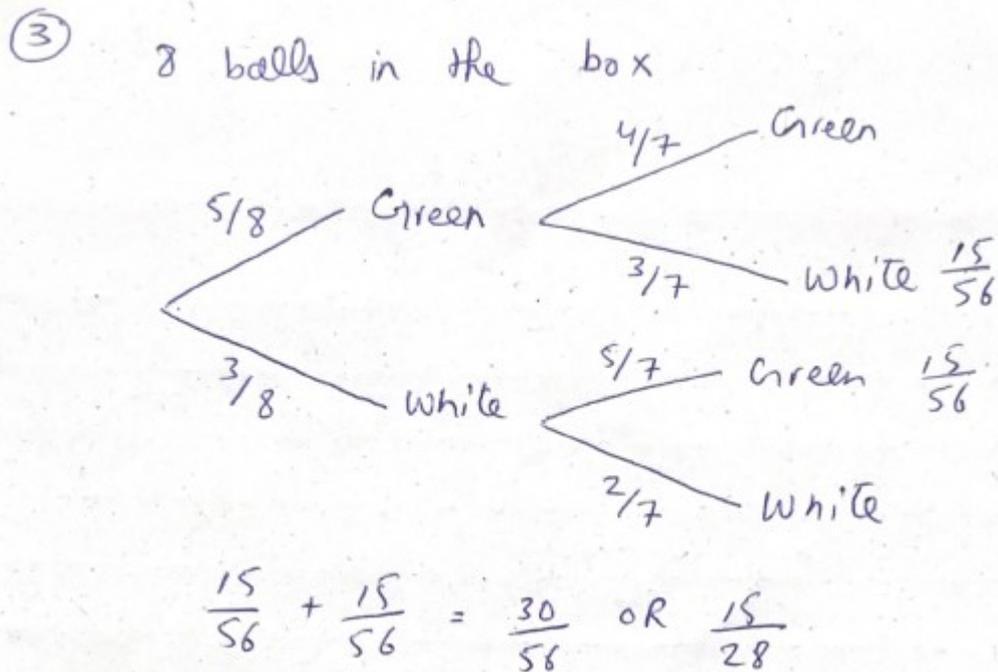
b)

$$P(B, P) = 0.6 \times 0.65 = 0.390$$

$$P(P, B) = 0.4 \times 0.68 = 0.272$$

$$0.390 + 0.272 = 0.662$$

Q3-



Q4-

(4) 12 balls in the bag

$$P(\text{Yellow, yellow}) = \frac{6}{12} \times \frac{5}{11} = \frac{30}{132}$$
$$P(\text{White, White}) = \frac{4}{12} \times \frac{3}{11} = \frac{12}{132}$$
$$P(\text{Orange, Orange}) = \frac{2}{12} \times \frac{1}{11} = \frac{2}{132}$$
$$\frac{30}{132} + \frac{12}{132} + \frac{2}{132} = \frac{44}{132} \text{ OR } \frac{11}{33}$$

Q5-

⑤ 7 scores with different numbers

$$a) P(1,1) = \frac{2}{7} \times \frac{1}{6} = \frac{2}{42} \text{ OR } \frac{1}{21}$$

$$P(2,2) = \frac{2}{7} \times \frac{1}{6} = \frac{2}{42} \text{ OR } \frac{1}{21}$$

$$P(3,3) = \frac{3}{7} \times \frac{2}{6} = \frac{6}{42} \text{ OR } \frac{3}{21}$$

$$\frac{1}{21} + \frac{1}{21} + \frac{3}{21} = \frac{5}{21}$$

b)

$$P(1,2) = \frac{2}{7} \times \frac{2}{6} \Rightarrow \frac{4}{42} \text{ OR } \frac{2}{21}$$

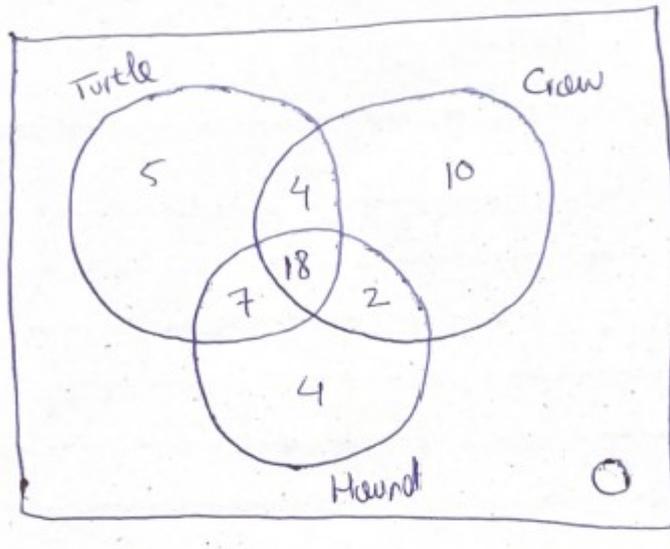
$$P(1,3) = \frac{2}{7} \times \frac{3}{6} \Rightarrow \frac{6}{42} \text{ OR } \frac{3}{21}$$

$$P(2,3) = \frac{2}{7} \times \frac{3}{6} \Rightarrow \frac{6}{42} \text{ OR } \frac{3}{21}$$

$$\frac{2}{21} + \frac{3}{21} + \frac{3}{21} = \frac{8}{21}$$

Q6-

⑥

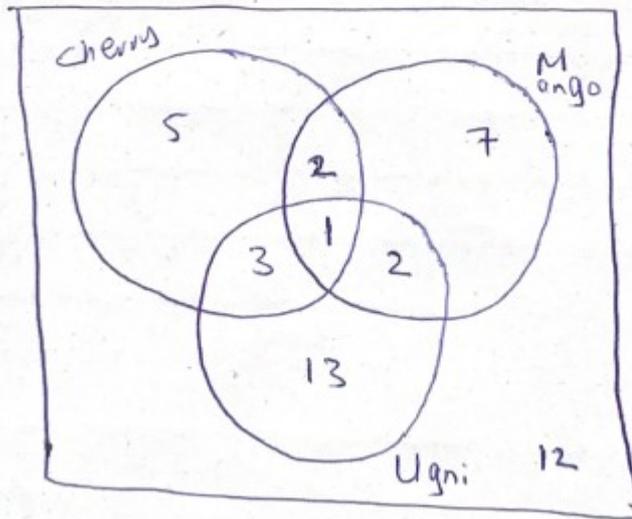


34 people like crew, 2 people chosen randomly

$$\frac{34}{50} \times \frac{33}{49} = \frac{1122}{2450} \text{ OR } \frac{561}{1225}$$

Q7-

⑦



- Two girls chosen randomly
- They only like Mango

$$\frac{7}{45} \times \frac{6}{44} = \frac{42}{1980}$$