Q.17 Probability

(a)
$$P(4) = P(\text{more than } 4 \text{ day})$$
$$= P(5) + P(6) + P(7)$$
$$= 0.41 + 0.20 + 0.07$$
$$\boxed{P(A) = 0.68}$$

(b)
$$P(B) = \text{less than } 6 \text{ days}$$
$$= P(3) + P(4) + P(5)$$
$$= 0.08 + 0.24 + 0.41$$
$$\underline{P(B) = 0.73}$$

(c)
$$P(A^c) = 1 - P(A)$$
$$= 1 - 0.68$$
$$\underline{P(A^c) = 0.32}$$

(d) $P(A \cap B) =$
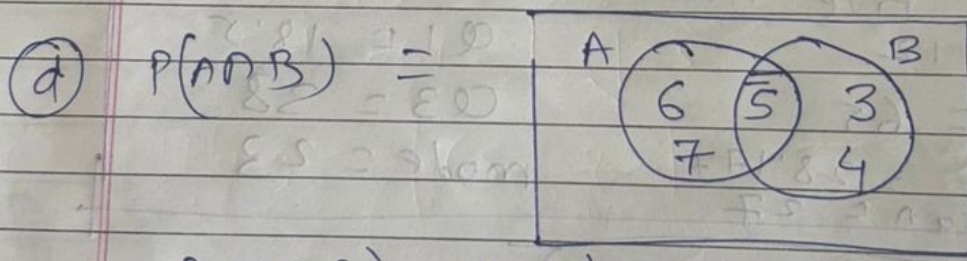
$$P(A \cap B) = P(5) = 0.41$$

(e)
$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$
$$= 0.68 + 0.73 - 0.41$$
$$\boxed{P(A \cup B) = 1} \Rightarrow \text{entire sample space}$$