



Solutions 4(c)

$$(i) P(A^c) = 1 - P(A)$$

$$= 1 - 0.1$$

$$= 0.9$$

Since $P(A) + P(A^c) = 1$ by defn.

$$(ii) P(A \cap B) = P(A) \times P(B)$$

$$= 0.05$$

$$(iii) P(A \text{ or } B) = P(A) + P(B) - P(A \cap B)$$
$$= 0.1 + 0.5 - 0.05$$

$$= 0.6 - 0.05$$

$$= \cancel{0.0} \underline{0.55} \rightarrow$$

$$(iv) P(B^c) = 1 - P(B)$$

$$= 1 - 0.5$$

$$= 0.5$$