a) $P(A \cup B) = \frac{|A \cup B|}{|\Omega|} = \frac{|A| + |B| - |A \cap B|}{|\Omega|}$

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

$= 0.6 + 0.8 - 0.5 = \underline{0.9}$

b) $P((A \cap B^c) \cup (B \cap A^c)) = \frac{|A| - |A \cap B| + |B| - |B \cap A|}{|\Omega|}$

$P((A \cap B^c) \cup (B \cap A^c)) = P(A) - P(A \cap B) + P(B) - P(A \cap B)$

$= 0.6 - 0.5 + 0.8 - 0.5 = \underline{0.4}$