Venn Diagrams and Probability Part 1

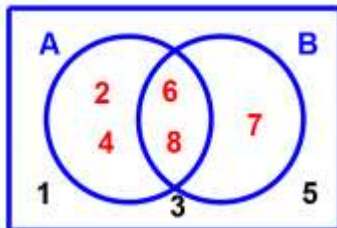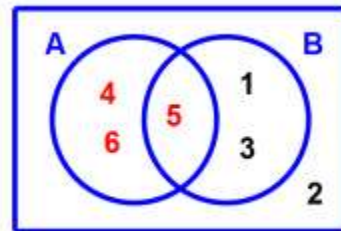Use your probability formulas and Venn Diagrams to calculate probability.

Probability of the Event Happening

$$P(A) = \frac{\text{\# of Outcomes Favourable to Event A}}{\text{Total \# of Possible Outcomes}}$$
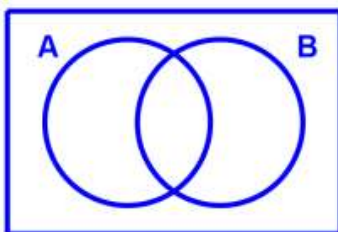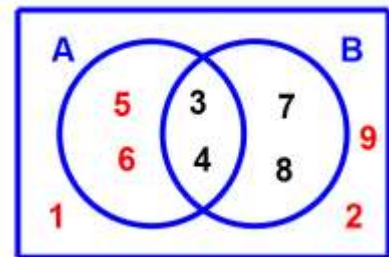
Probability of the Event Not Happening

$$P(A') = \frac{\text{\# of Outcomes Not Favourable to Event A}}{\text{Total \# of Possible Outcomes}}$$

Example 1: Given the Venn diagram below where U = {1, 2, 3, 4, 5, 6}, determine the value of P (A).

Example 2: Given the Venn diagram below where U = {1, 2, 3, 4, 5, 6, 7, 8}, determine the value of P(A ∪ B).

Example 3: Given the Venn diagram below where U = {1, 2, 3, 4, 5, 6, 7, 8, 9}, determine the value of P (B').

Example 4: Make a Venn diagram to find P(A ∩ B) for the following situation. You roll a six-sided die. Event A is rolling an even number; Event B is rolling a number greater than 3.

Example 5: Make a Venn diagram to find P (B') for the following situation. You roll a six-sided die. Event A: Rolling an odd number; Event B: Rolling a number less than 3.