

Chapter 5 → PROBABILITY

Probability

$$P = \frac{\# \text{ of fav. outcomes}}{\text{total } \# \text{ of outcomes}}$$

$$* \# \text{ of fav. outcomes} + \# \text{ of unfav. outcomes} = \text{total } \# \text{ of outcomes}$$

Odds

in favour → fav: unfav.

against → unfav: fav

OR

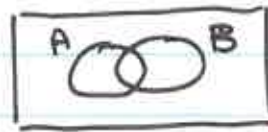
+

Mutually Exclusive



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

NOT Mutually Exclusive



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

AND

x

Dependent Event

(probability of event A affects event B)

$$P(A \cap B) = P(A) \cdot P(B|A)$$

$$P(B|A) = \frac{P(A \cap B)}{P(A)}$$

Independent Event

$$P(A \cap B) = P(A) \cdot P(B)$$

* draw the tree diagram!

Event A and Event B

