

Probability II

AND Probability - the probability of two events both occurring at the same time

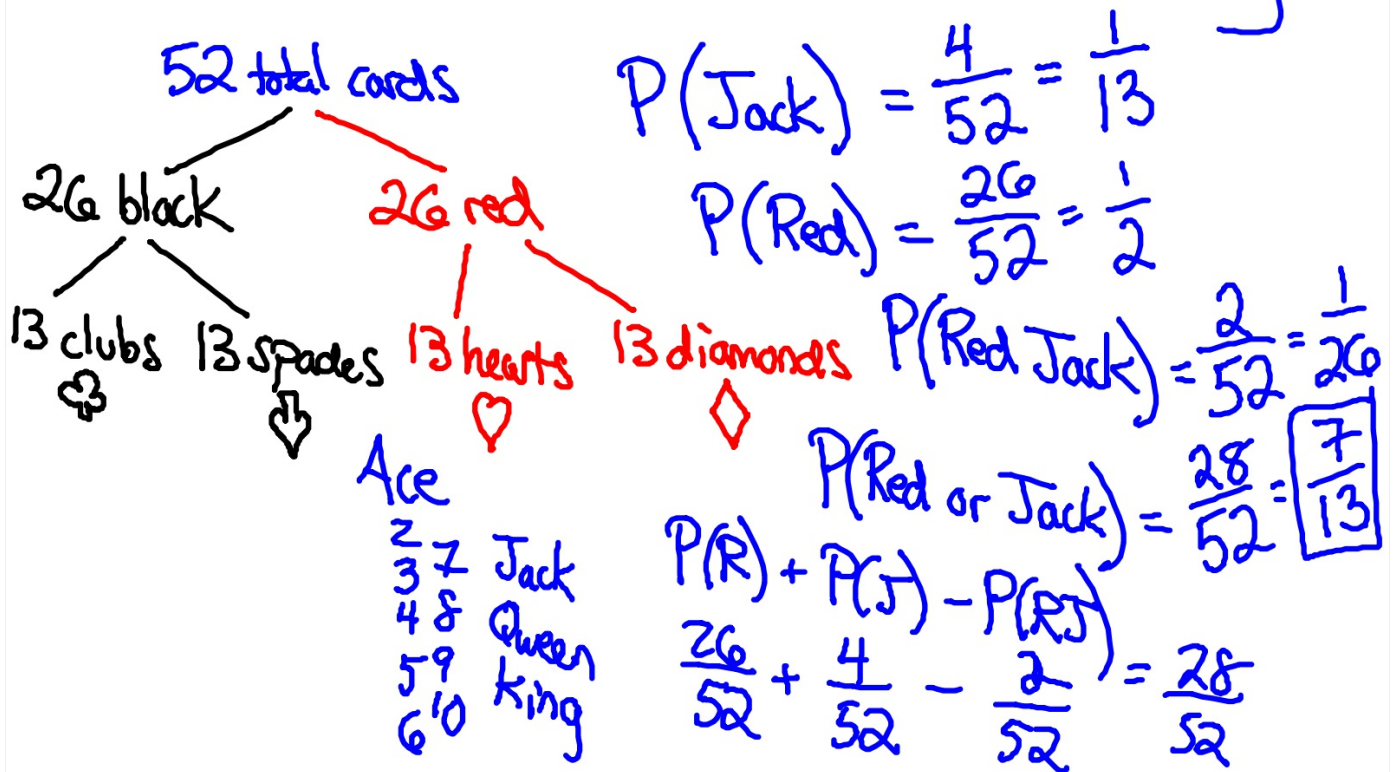
Event A = boy Event B = wearing shorts

$$P(A) = \frac{7 \text{ boys}}{11 \text{ total}} \quad P(B) = \frac{3 \text{ shorts}}{11 \text{ total}}$$

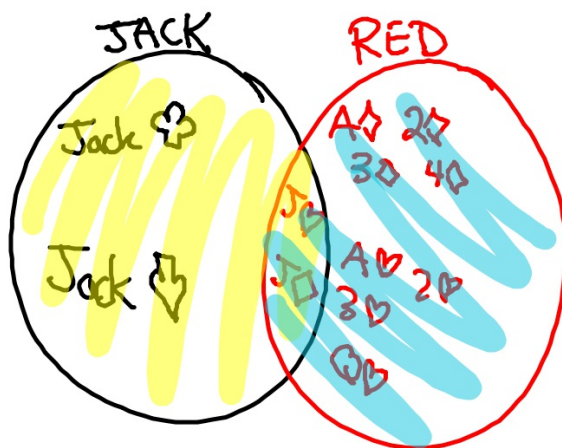
$$P(AB) = \frac{3 \text{ boys in shorts}}{11 \text{ total}}$$

AND Prob. = $\frac{\# \text{ winners}}{\text{total \#}}$

OR Probability - the probability of one event OR the other event occurring



Venn Diagram



$$P(A \text{ or } B) = P(A) + P(B) - P(AB)$$

↑
AND Probability