



## Addition Rule in Probability

### Today's Standard

HSS.CP.B7 - Apply the Addition Rule,  $P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$ , and interpret the answer in terms of the model.

Cues	Notes
Addition Rule	The Addition Rule is used to find the probability of either event A or event B occurring.
$P(A \text{ or } B)$	$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
Overlap	The overlap (intersection) must be subtracted to avoid double-counting.
Intersection	Mutually exclusive events do not overlap, so $P(A \text{ and } B)$ is zero.
Mutually Exclusive	

### Summary

The Addition Rule helps calculate the probability of either of two events occurring by accounting for their overlap. It is essential for understanding non-mutually exclusive events.