

Roll and Win

You roll two regular dice and add the numbers that come up together.

$P(3) =$

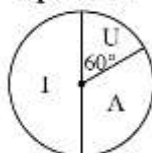
$P(9) =$

$P(2 \text{ or } 6) =$

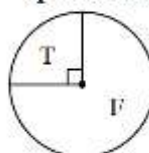
		Dice #1					
		1	2	3	4	5	6
Dice #2	1				5		
	2		4				
	3						
	4			7			
	5						
	6						

Probability Models

Spinner #1



Spinner #2



Area Model

Tree Diagram

Unions, Intersections, and Complements

If you randomly choose an integer from 1 to 10 the sample space is $\{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

The event "Prime Numbers" would be the set $\{2, 3, 5, 7\}$. We will call this Event A.

The event "Even Numbers" would be the set $\{2, 4, 6, 8, 10\}$. We will call this Event B.

Complement

The complement is the set of all outcomes in a sample space not in the original event.

$P(A) = \text{probability of event } A$

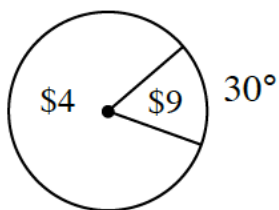
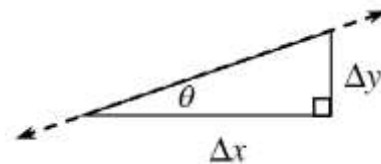
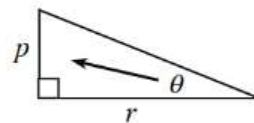
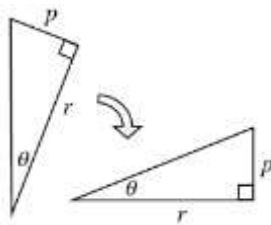
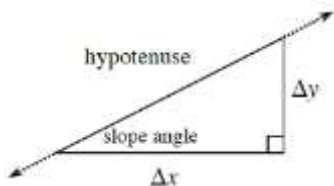
$P'(A) = \text{complement of event } A$

Intersection

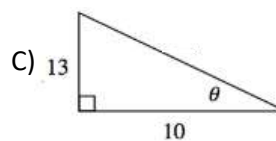
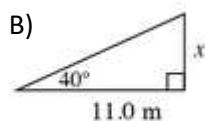
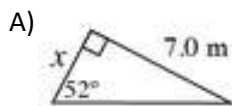
The intersection of two events is the event in which both the first event and second event occur.

Union

The union of two events is the event in which the first event OR the second event (or both) occur.

Expected Value**Slope and Angle Notation** θ (theta) α (alpha) β (beta) Δ (delta)**Tangent Ratio****Solve for a missing side or angle using Tangent.**

Write an equation using tangent and solve for the missing side length.



Karen is flying a kite on a windy day. Karen is holding the kite 3 feet above ground and is standing a horizontal distance of 60 feet away from the kite. The angle of elevation up to the kite is 39° .

•Draw a diagram for the situation and label with given measurements.

•Write an equation using tangent and solve for the height of the kite.

