IB

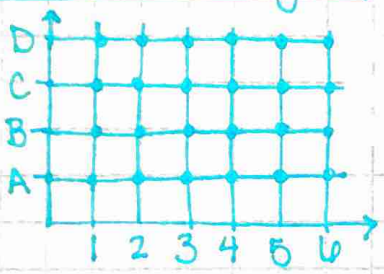
Sample Space

* sample space (u): set of all possible outcomes
"universal set"

{organizing outcomes}

listing [ex1] outcomes for HS ages
sample space = {13, 14, 15, 16, 17, 18, 19}

2 dimensional grid [ex2] outcomes for a die & a spinner A-D



{1A, 2A, 3A, 4A . . . . 6D}

*each dot is an outcome

tree diagram [ex3] draw 2 marbles red, blue or green

*each branch is an outcome

Theoretical Probability

$\frac{P(\text{wanted})}{P(\text{outcomes})}$

* what we expect to occur when equal likelyhood

[ex1] probability of rolling a 2
$P(2) = 1/6$

[ex2] P(not a 2)
$P(3,4,5,6,1) = 5/6$

[ex3] P(3 or 4)
$P(3 \text{ or } 4) = 2/6 = 1/3$

complimentary
$P(A) + P(A') = 1$