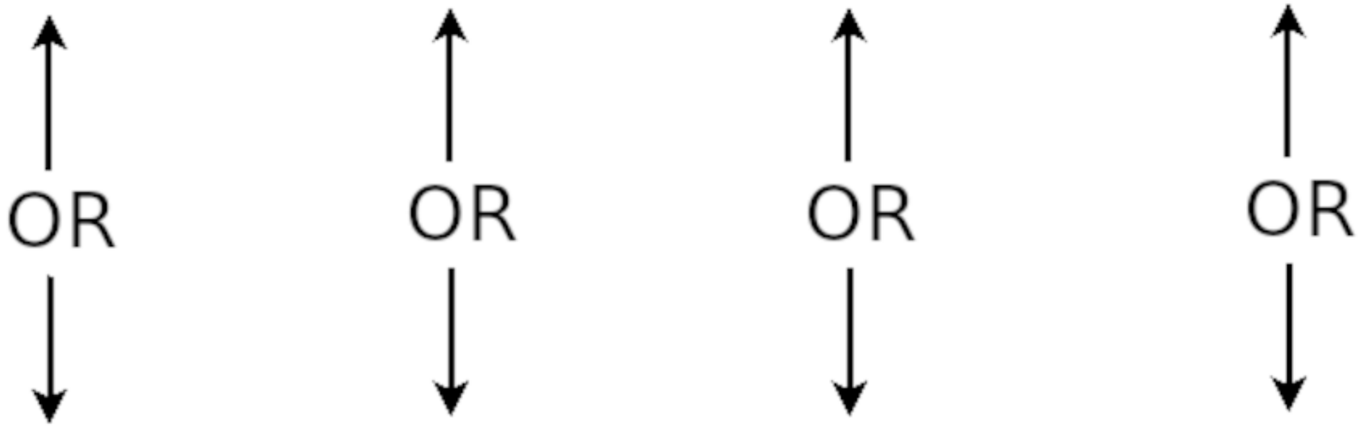
Observed



Observer

{ } { } { } { }

OR OR OR OR

{X} {X} {X} {X}

$$54 \times 23$$

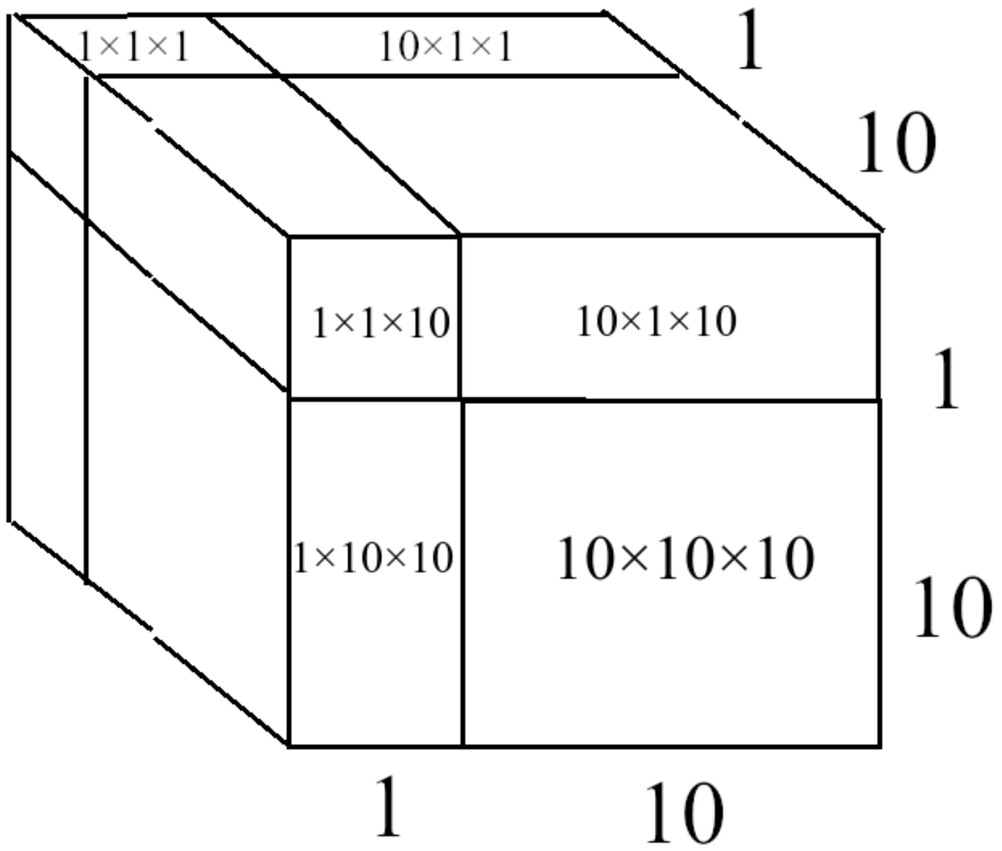
$$(50 + 4) \times (20 + 3)$$

	50	4
20	1000	80
3	150	12

$$11 \times 11 \times 11$$

$$(10+1) \times (10+1) \times (10+1)$$

$$1000 + 3 \times 100 + 3 \times 10 + 1$$



Heads OR Tails

$$1$$

$$(H+T) = H + T$$

$$(H+T)(H+T) = HH + HT + TH + TT$$

$$H^2 + 2HT + T^2$$

$$(H+T)(H+T)(H+T) =$$

$$HHH + HHT + HTH + HTT + THH + THT + TTH + TTT$$

$$H^3 + 3H^2T + 3HT^2 + T^3$$

½ OR ½

1

100%

$(½+½)$ = ½ + ½

50% 50%

$(½+½)(½+½)$ = $½^2 + 2½½ + ½^2$

25% + 50% + 25%

$(½+½)(½+½)(½+½)$ = $½^3 + 3½^2½ + 3½½^2 + ½^3$

12.5% + 37.5% + 37.5% + 12.5%

Girl OR Boy

$$(g+b) = 1$$

$$(g+b) = g + b$$

$$(g+b)(g+b) = g^2 + 2gb + b^2$$

$$(g+b)(g+b)(g+b) = g^3 + 3g^2b + 3gb^2 + b^3$$

⅔ OR ⅓

$$1$$
$$100\%$$

$$(⅔+⅓) = ⅔ + ⅓$$
$$66\% \quad 33\%$$

$$(⅔+⅓)(⅔+⅓) = ⅔^2 + 2⅔⅓ + ⅓^2$$
$$44\% \quad 44\% \quad 11\%$$

$$(⅔+⅓)(⅔+⅓)(⅔+⅓) = ⅔^3 + 3⅔^2⅓ + 3⅔⅓^2 + ⅓^3$$
$$30\% \quad 44\% \quad 22\% \quad 4\%$$

100% OR 10%

$$1$$
$$100\%$$

$$(1+0.1) = 1 + 0.1$$
$$100\% + 10\%$$

$$(1+0.1)(1+0.1) = 1^2 + 2*1*0.1 + 0.1^2$$
$$100\% \quad 20\% \quad 1\%$$

$$(1+0.1)(1+0.1)(1+0.1) = 1^3 + 3*1^{2*}0.1 + 3*1*0.1^2 + 0.1^3$$
$$100\% \quad 30\% \quad 3\% \quad 0.1\%$$

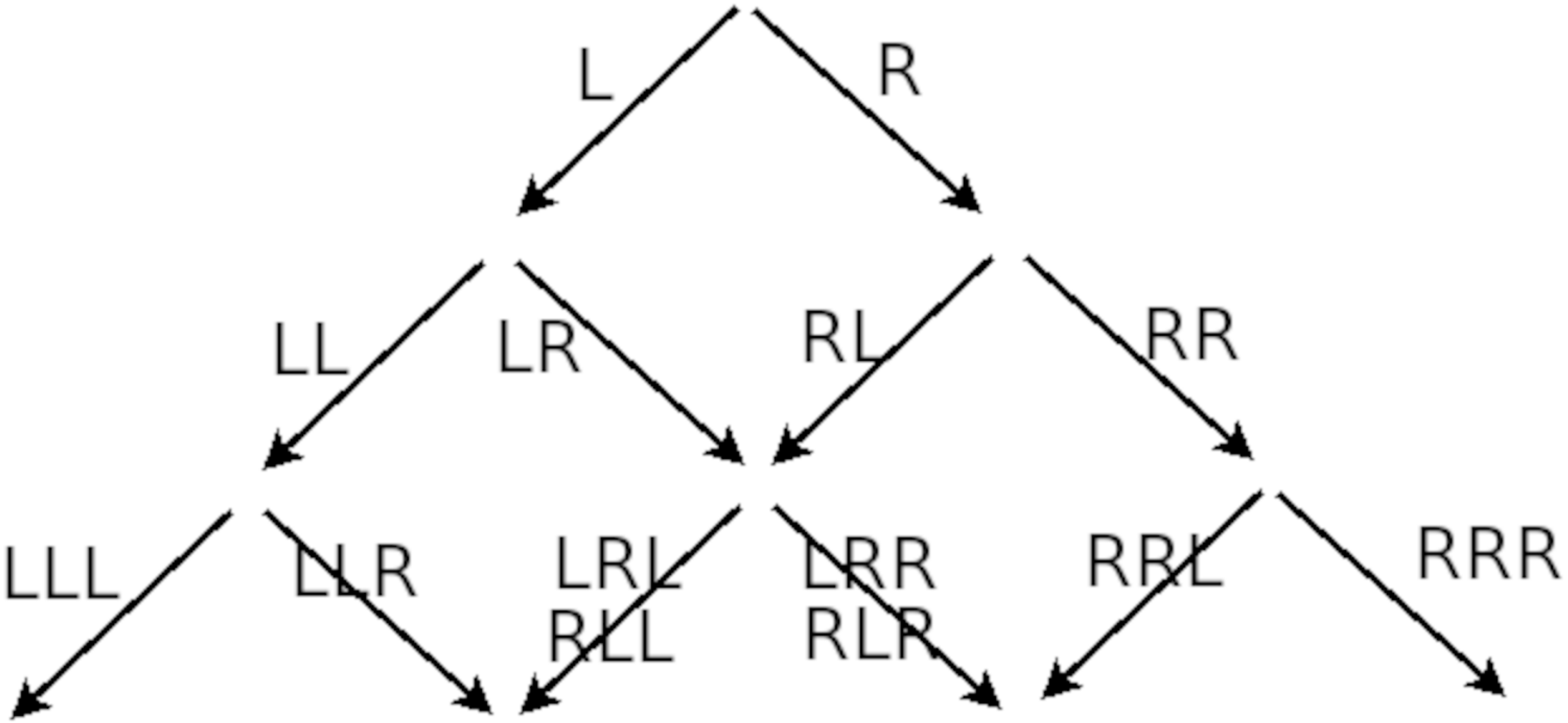
Left OR Right

$$1$$

$$(L+R) = L + R$$

$$(L+R)(L+R) = L^2 + 2LR + R^2$$

$$(L+R)(L+R)(L+R) = L^3 + 3L^2R + 3LR^2 + R^3$$


L
R
LL
LR
RL
RR
LLL
LLR
LRL
LRR
RRL
RRR
RLL
RLR

Bullet OR Not

1

(B+N) = B + N

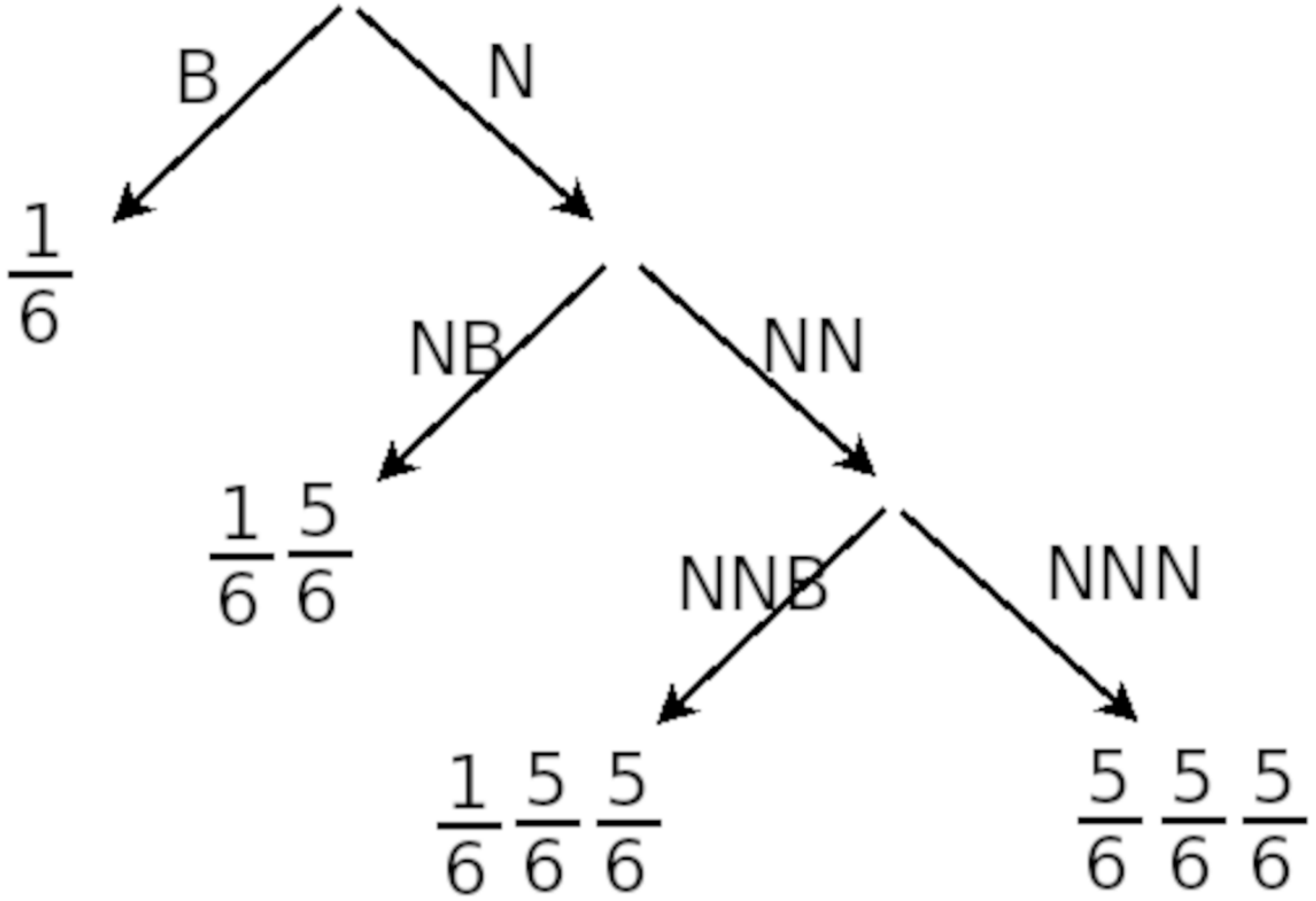
1/6 5/6

(B+N)(B+N) = BB + BN + NB + NN

5/6 1/6 5/6 5/6

(B+N)(B+N)(B+N) =

BBB + BBN + BNB + BNN + NBB + NBN + NNB + NNN


B
N
1/6
NB
NN
1/6 5/6
NNB
NNN
1/6 5/6 5/6
5/6 5/6 5/6

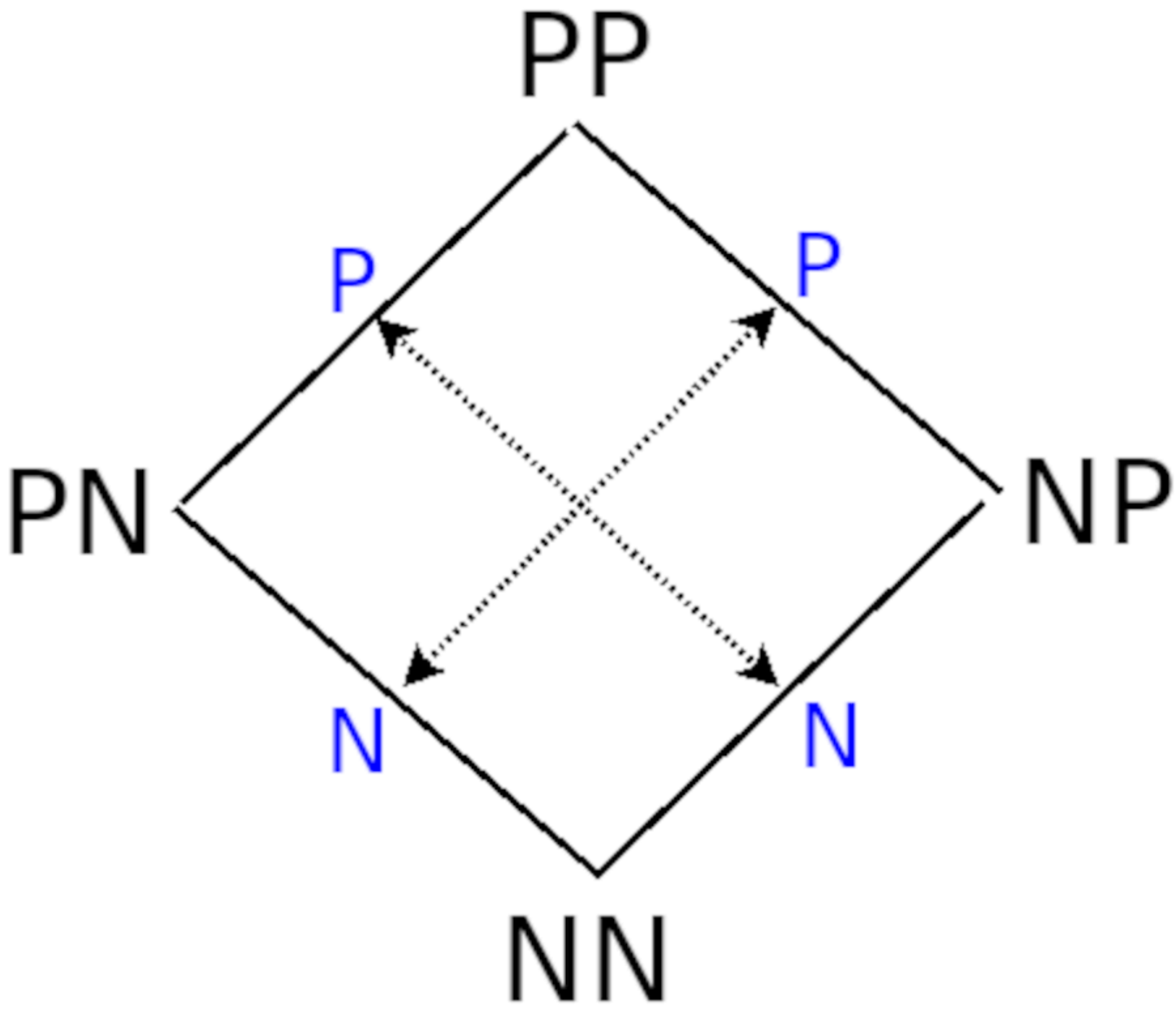
Positive OR Negative

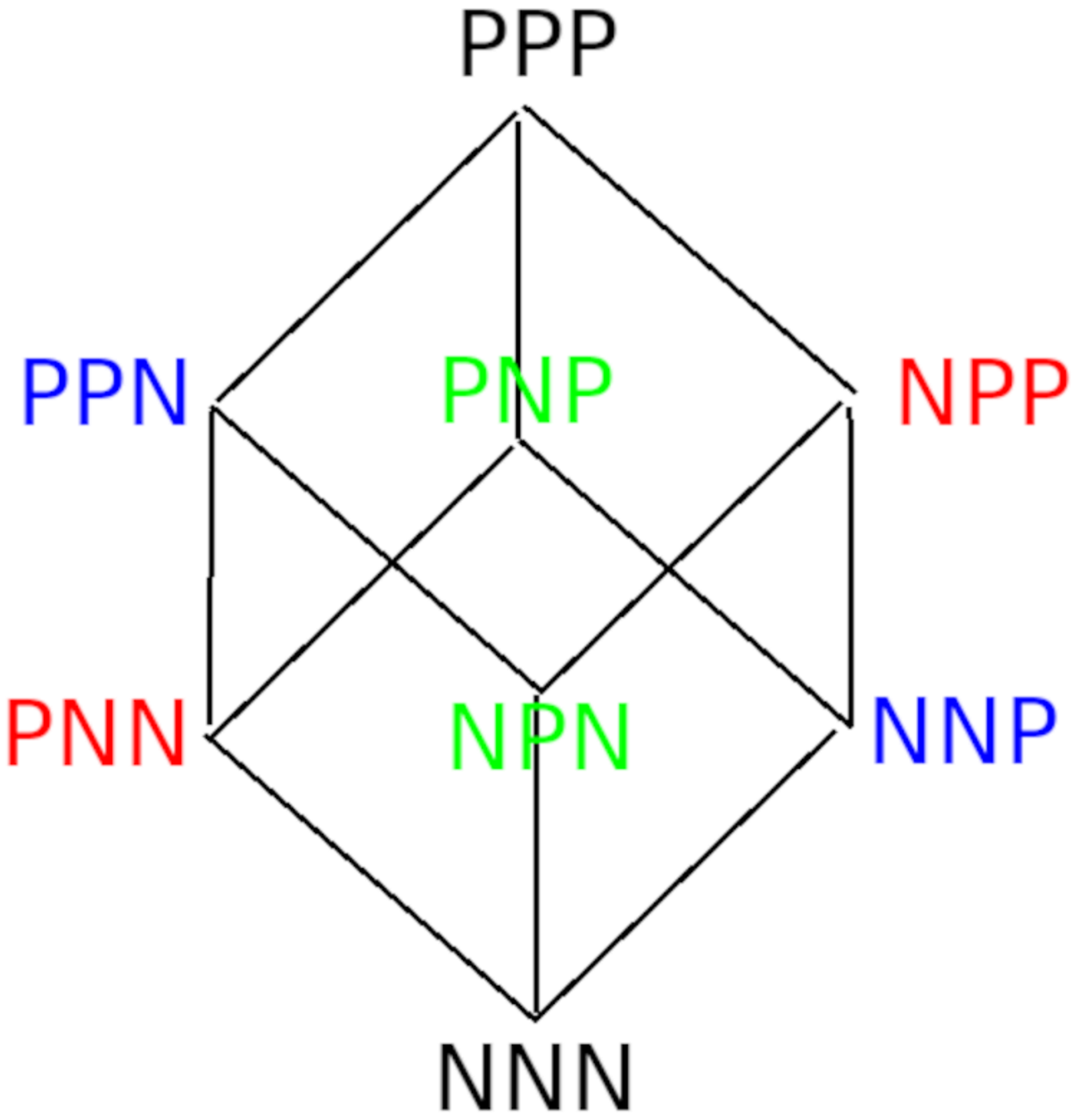
$$1$$

$$(P+N) = P + N$$

$$(P+N)(P+N) = P^2 + 2PN + N^2$$

$$(P+N)(P+N)(P+N) = P^3 + 3P^2N + 3PN^2 + N^3$$


PP
P
P
PN
NP
N
N
NN


PPP
PPN
PNP
NPP
PNN
NPN
NNP
NNN

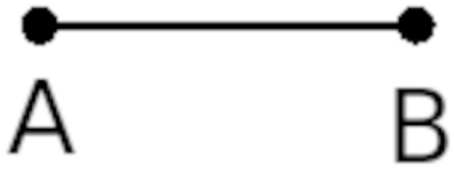
Exists OR Not

$$(E+N) = 1$$

$$(E+N) = E + N$$

$$(E+N)(E+N) = E^2 + 2EN + N^2$$

$$(E+N)(E+N)(E+N) = E^3 + 3E^2N + 3EN^2 + N^3$$



2 vertices

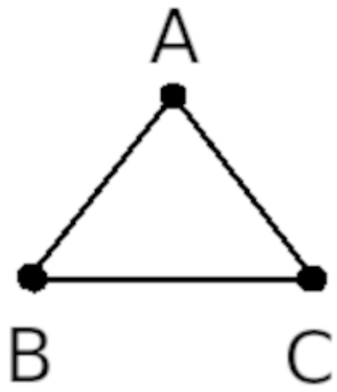
{A,B}

1 vertex

{A}{B}

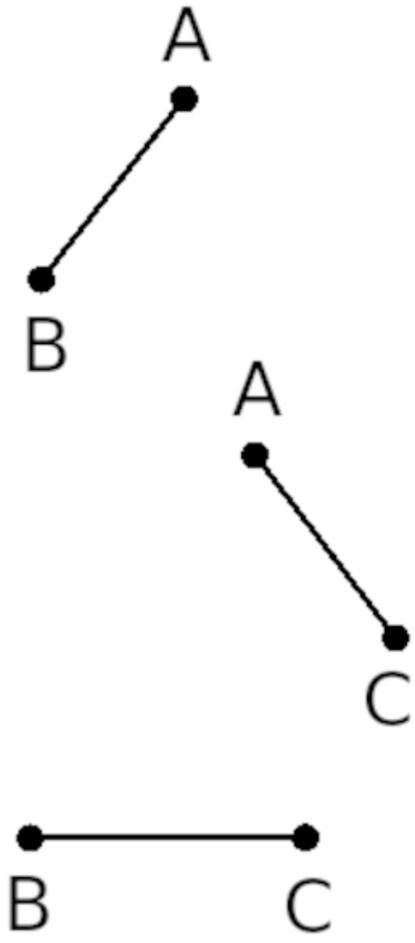
no vertices

{ }



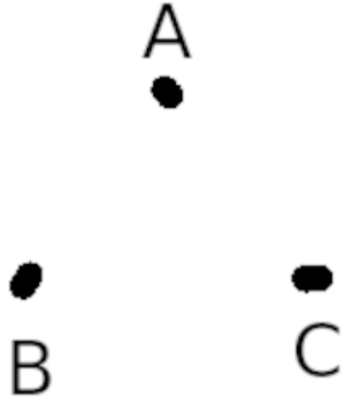
3 vertices

{A,B,C}



2 vertices

{A,B}{A,C}{B,C}



1 vertex

{A}{B}{C}

no vertices

{}

1 židinys

1 židinys
1 taškas

1 židinys
2 taškai
1 briauna

1 židinys
3 taškai
3 briaunos
1 siena

1

1 1

1 2 1

1 3 3 1

1 4 6 4 1

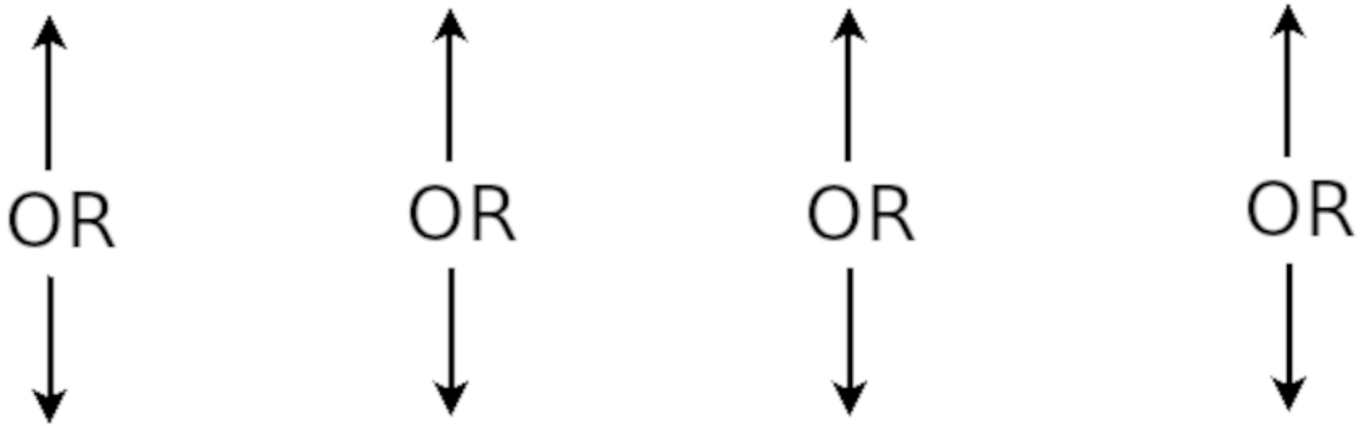
1 5 10 10 5 1

1 židinys
4 taškai
6 briaunos
4 sienos
1 ląstelė

?

1 židinys
5 taškai
10 briaunų
10 sienų
5 ląstelių
1 visuma

Observed



Observer

{ } { } { } { }

OR OR OR OR

{X} {X} {X} {X}