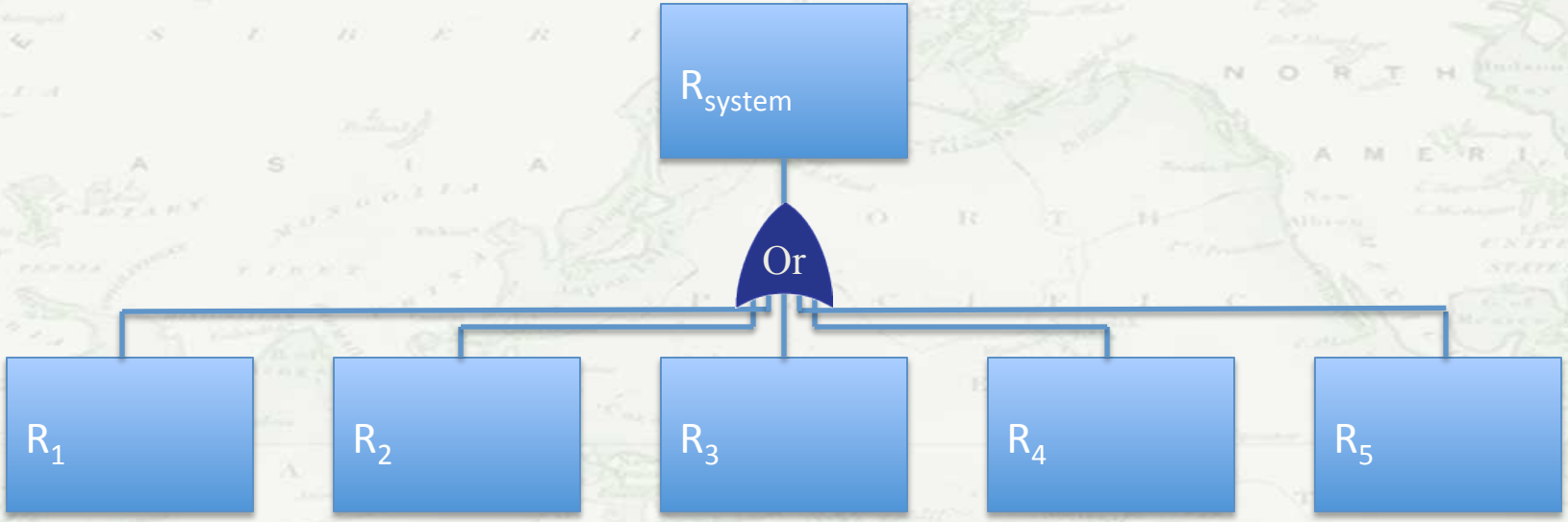
ASQ CRE Prep course

Lesson IV. A. 2. b.

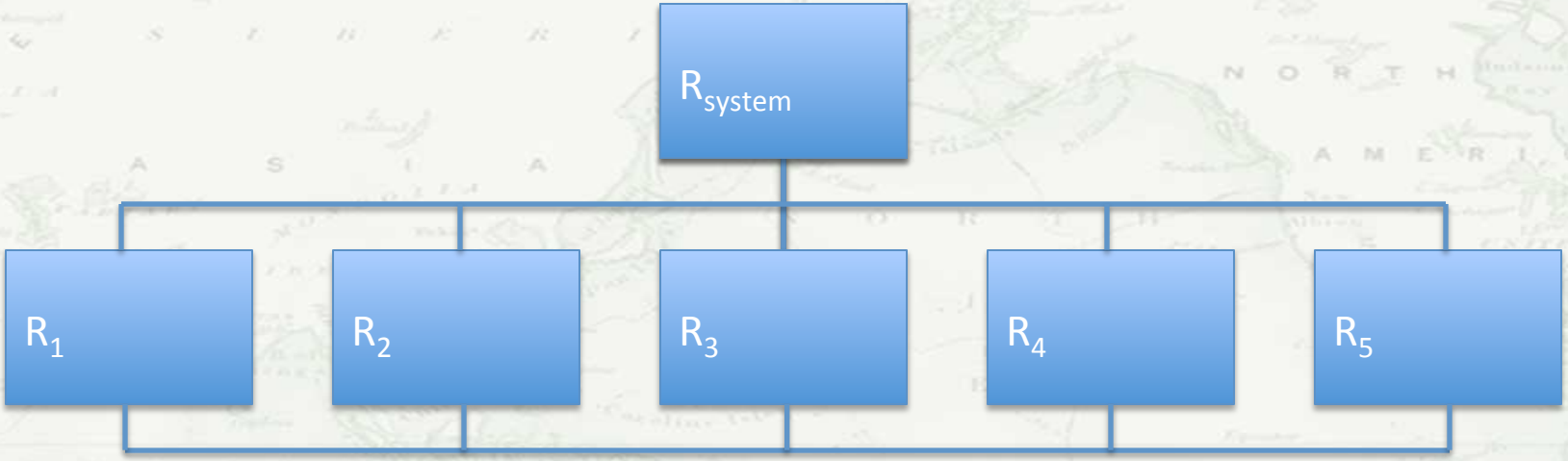
Reliability Block Diagrams and Models – Parallel Systems

The weakest link tolerated
RELIABILITY BLOCK DIAGRAM
PARALLEL SYSTEM

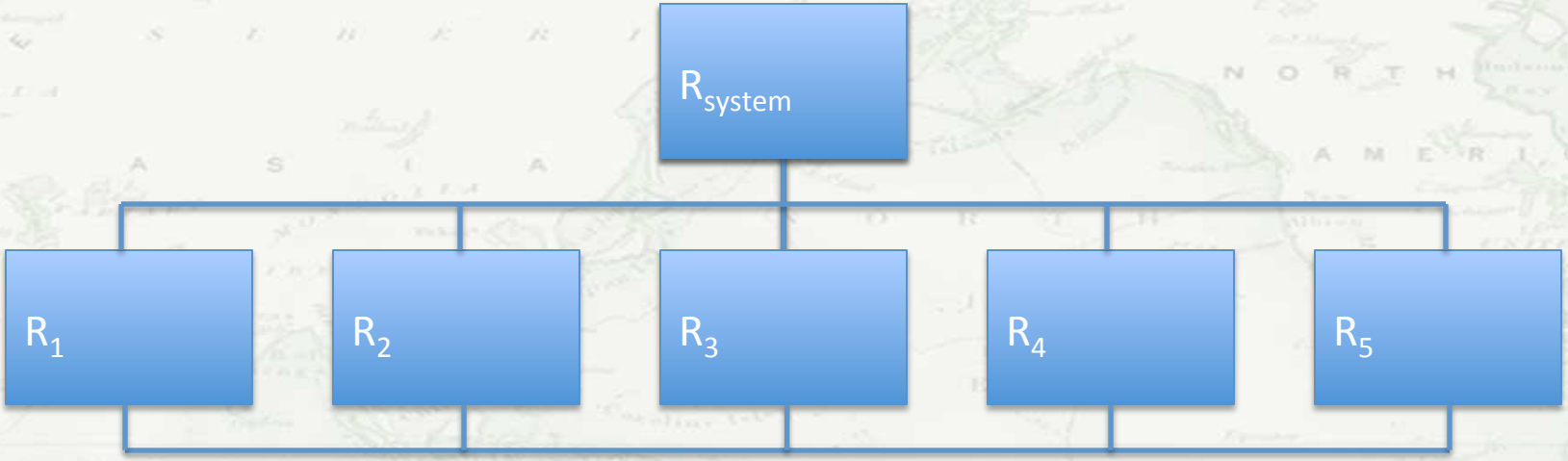
Parallel System (Success Tree)



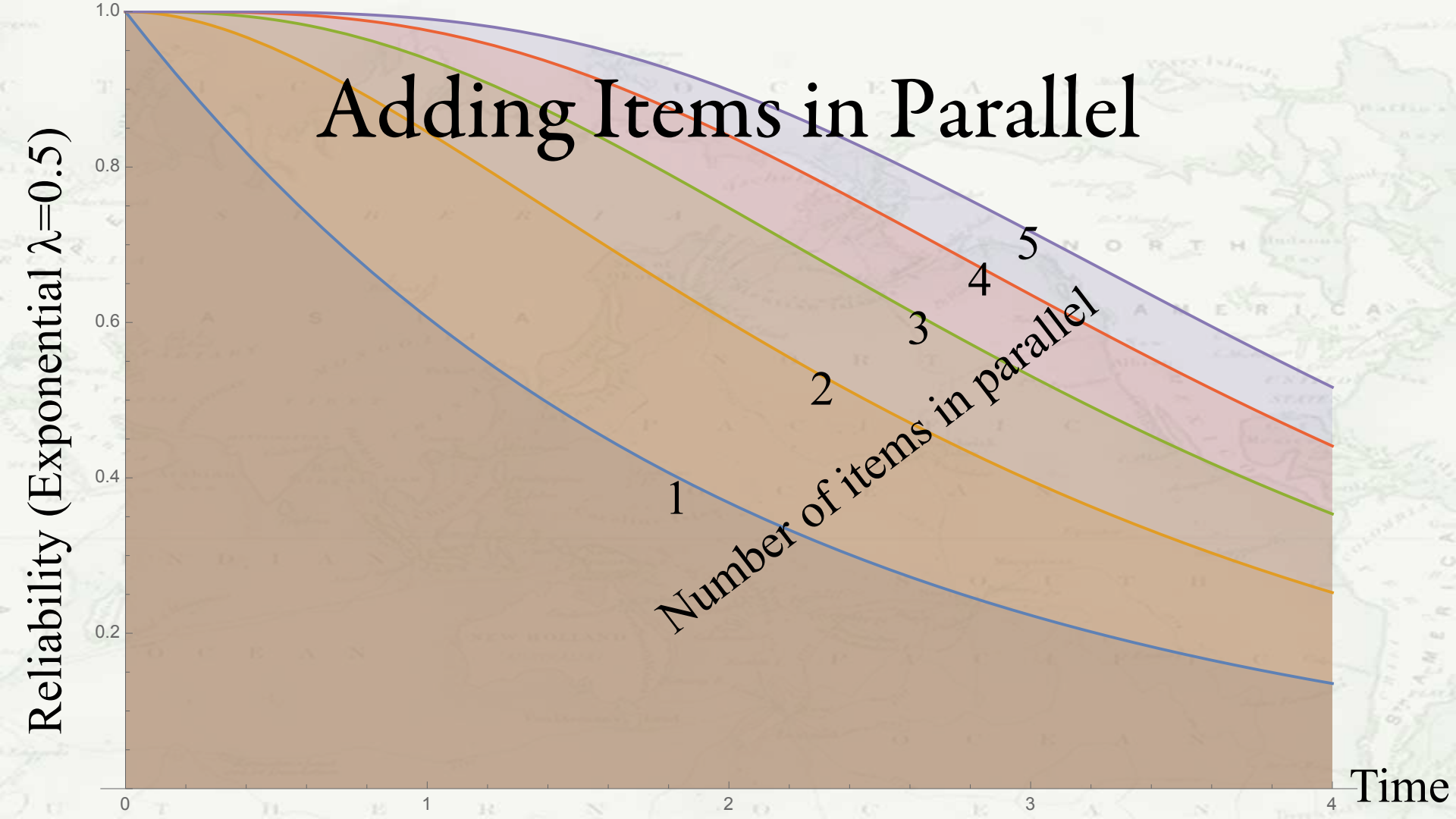
Parallel System (RBD)



Parallel System (RBD)



$$R_{system} = 1 - \prod (1 - R_i)$$


Adding Items in Parallel
Reliability (Exponential λ=0.5)
1.0
0.8
0.6
0.4
0.2
0
1
2
3
4
Time
1
2
3
4
5
Number of items in parallel

Why isn't this done all the time?

ASQ CRE Prep course

Lesson IV. A. 2. c.

Reliability Block Diagrams and Models – Redundancy