



# ASQ CRE Prep course

Lesson IV. A. 2. d.

Reliability Block Diagrams  
and Models – Complex

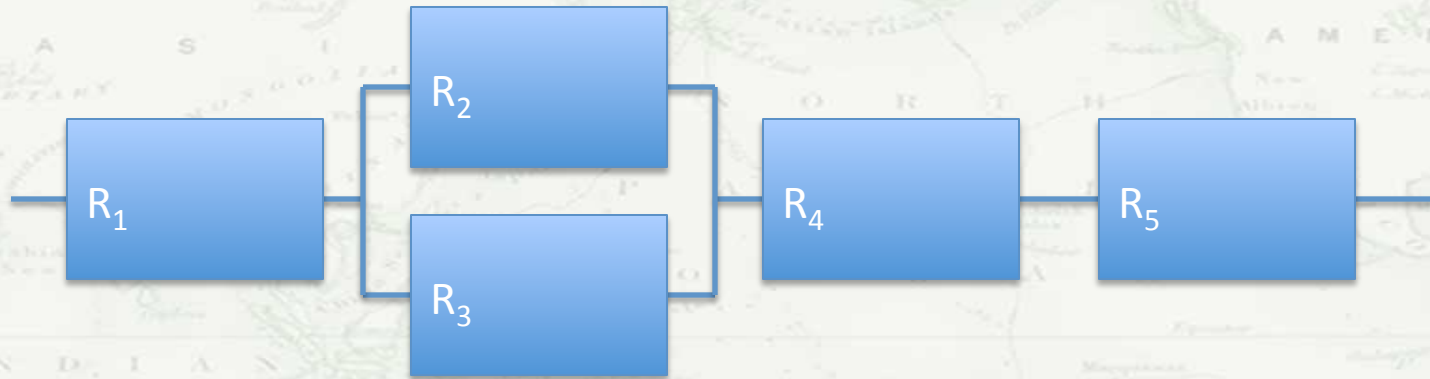
A photograph of a forest stream. The water is clear and flows over rocks. There are patches of snow on the banks and in the water. Sunlight filters through the trees, creating a dappled light effect. The background is a dense forest with green foliage.

Cannot be simpler

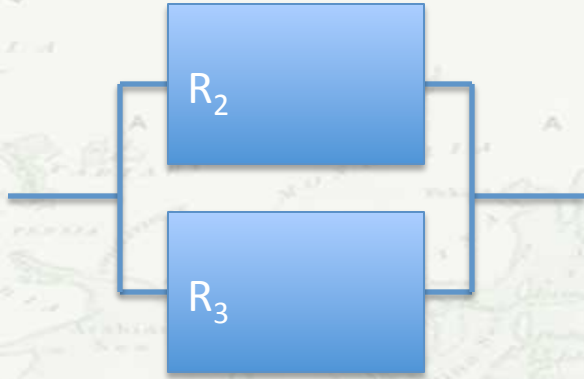
# RELIABILITY BLOCK DIAGRAM COMPLEX SYSTEM



# A mix of series and parallel

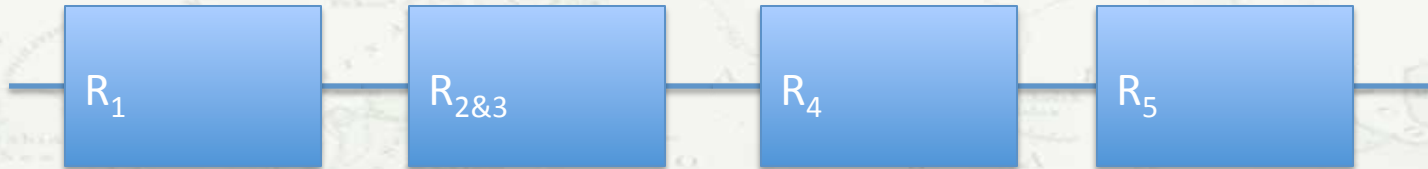


# Simplify



$$R_{2\&3} = 1 - \prod (1 - R_i)$$

# Now all is Series



$$R_{\text{system}} = \prod R_i$$

One step  
at a time



# ASQ CRE Prep course

Lesson IV. A. 2. e.

Reliability Block Diagrams  
and Models – Keynote