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## PROBABILITY OF BEING EXCEEDANCE

n% probability of exceedance for x years.  
eg. 10% 50 yrs.  
= mean recurrence level

\* There are 10% chance that forces will exceed in 50 yrs.

$$= 10/50 = 0.2\% \text{ in } 1 \text{ yr.}$$

Return period =  $\frac{1}{0.2\%} = 500 \text{ yrs approx.}$   
or precisely

$$RP = \frac{T}{z^*}$$

$$z^* = z (1 + 0.5z) = -\log_e (1 - z)$$

$z$  is percent. probability.