

M20 Concept Question 1

Comment on your level of confidence to explain the phenomena and underlying mechanisms behind the following ideas to freshmen in 16.00?

- 1) Metals tend to be more susceptible to fatigue than glasses or ceramics .
- 2) Increasing the hardness of a metal (by peening, case-hardening) will often improve the fatigue life.
- 3) Many aerospace structures are designed to be tolerant of the presence of cracks, and choice of the inspection intervals and NDE methods are included in the design process. (Damage-tolerant design)
 1. Supremely confident
 2. Somewhat confident
 3. Could do it on a good day
 4. Uncertain
 5. Utterly confused