

Competition Corner: Comparing Model Cards

Optional Extension | g10_u08_w31

Use only the supplied cards: M = 8/10 in L, C = 1/10 in L, P = 2/10 in L, and S = 2/10 in L versus 7/10 in H. These are simplified property cues, not product tests, design requirements, safety findings, or medical evidence.

1. Compute the ratio of M's L score to C's L score. State the comparison but do not turn it into a product claim.
2. S changes by 5 score units from L to H. Compare that change with the M–P difference in L. What numerical relation do they share?
3. A student says, "Because S changes across L and H, all semiconductors behave the same way in every condition." Identify the supported observation and two unsupported additions.
4. Give the narrowest valid conclusion from the C and P cards, then name one missing evidence category before a design decision could be evaluated.

Key. 1. $8/1 = 8$; M's supplied L score is eight times C's on this scale only. 2. $8 - 2 = 6$, so the S change (5) is one unit smaller. 3. Supported: the printed S card changes from 2 to 7 across its two labels. Unsupported: every semiconductor and every condition. 4. In L, P's score is 2 and it bends while C's is 1 and it cracks; examples of missing evidence: quantified testing under stated conditions, durability, geometry/loading, safety, or manufacturing evidence.