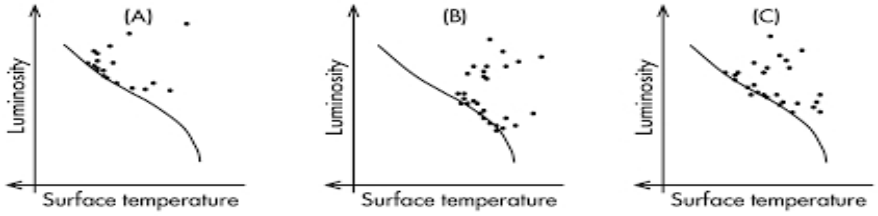
Star Cluster Ages

3. Shown below are H-R diagrams of three separate star clusters (A)-(C). Rank the star clusters from youngest to oldest. Indicate ties, if any.

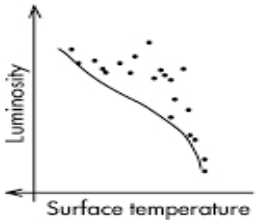


_____ _____ _____

(youngest) (oldest)

Impossible Star Cluster H-R Diagram

4. Shown at right is an H-R diagram of a star cluster. "Why is this star cluster H-R diagram not possible?" Two astronomy students gave the following explanations on their second midterm[1]:



Student 0310: This H-R diagram is not possible for a star cluster because the medium-mass stars should stay on the main sequence for a longer period than the massive stars.

Student 4336: It is highly unlikely that massive stars would be still on the main sequence when low mass stars are also on the main sequence, without the medium-mass stars also being on the main sequence.

Do you agree or disagree with either or both of the students? Explain your reasoning.

Student(s) you agree with: _____.
Student(s) you disagree with: _____.
Explanation:

[1] Adapted from http://waiferx.blogspot.com/2010/05/astronomy-midterm-question.html.