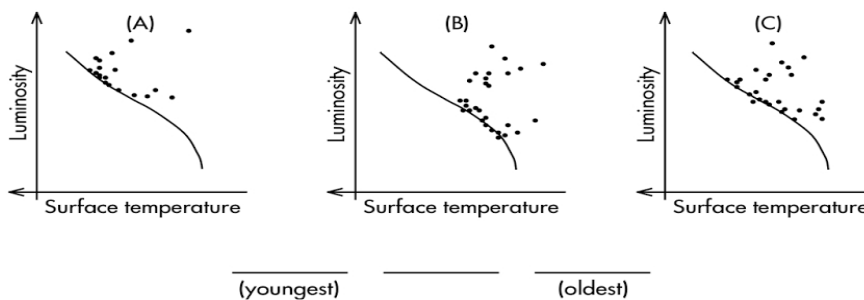


*Star Cluster Ages*

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.

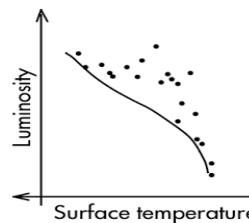


*Impossible Star Cluster H-R Diagram*

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<sup>1</sup>:

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:

<sup>1</sup>Adapted from <http://waiferx.blogspot.com/2010/05/astronomy-midterm-question.html>.