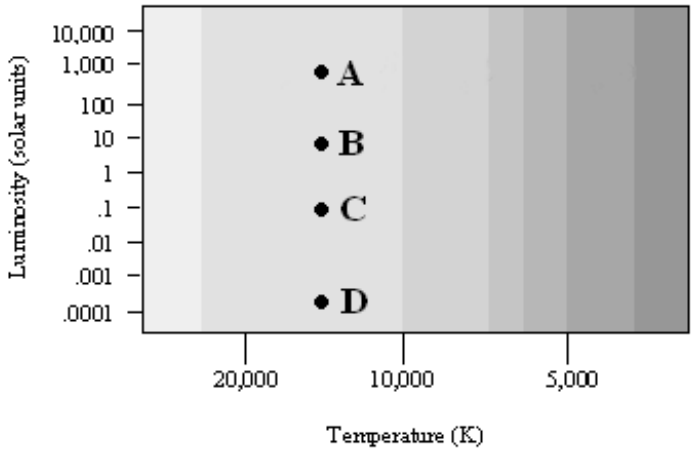
Astronomy Ranking Task:
Luminosity of Stars

Exercise #3

Description: Consider the Hertzsprung-Russell (HR) diagram shown below which relates the luminosity (in solar units) to the temperature for four stars (A - D).



A. Ranking instructions: Rank the temperature of the stars (A – D) from hottest to coldest.

Ranking Order: Hottest 1 ____ 2 ____ 3 ____ 4 _____ Coldest

Or, all the stars have the same temperature. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____
_____
_____
_____

B. Ranking instructions: Rank the luminosity of the stars (A – D) from greatest (brightest) to least (dimmest).

Ranking Order: Greatest 1 ____ 2 ____ 3 ____ 4 _____ Least

Or, all the stars have the same luminosity. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____
_____
_____
_____

C. Ranking instructions: Rank the surface area of the stars (A – D) from smallest to largest.

Ranking Order: Smallest 1 ____ 2 ____ 3 ____ 4 _____ Largest

Or, all the stars have the same surface area. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____
_____
_____
_____