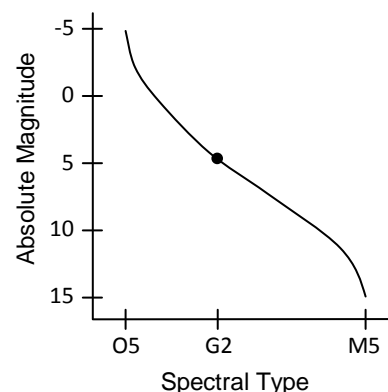# Astronomy Ranking Task:
Spectroscopic Parallax

Exercise #1

Description: The table below provides an incomplete list of the spectral types, magnitudes, and distances of six main sequence stars labeled A through F. Also shown is an H-R diagram with main sequence.

Star	Spectral Type	m	M	Distance (pc)
A	G2			10
B		15	-4	
C	M5	2		
D		11	9	
E			0	10
F	F0	2	3	

A. Ranking instructions: Rank the temperatures of the stars.

Ranking Order: Hottest   1 _____   2 _____   3 _____   4 _____   5 _____   6 _____   Coolest

Or, there is not enough information to determine the temperatures of the stars. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____

_____

_____

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_____

B. Ranking instructions: Rank how bright the stars appear.

Ranking Order: Brightest   1 _____   2 _____   3 _____   4 _____   5 _____   6 _____   Faintest

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

Carefully explain your reasoning for ranking this way:

_____

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C. Ranking instructions: Rank the actual energy output of the stars.

Ranking Order: Least   1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____   Most

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

Or, there is not enough information to determine the energy output of the stars. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____

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_____

D. Ranking instructions: Rank the distances of the stars.

Ranking Order: Farthest   1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____   Closest

Or, the distance to each star is the same. _____ (indicate with a check mark)

Or, there is not enough information to determine the distances of the stars. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

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E. Ranking instructions: Rank the sizes of the stars.

Ranking Order: Smallest   1 _____   2 _____   3 _____   4 _____   5 _____   6 _____   Largest

Or, there is not enough information to determine the sizes of the stars. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

_____

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F. Ranking instructions: Rank the masses of the stars.

Ranking Order: Most   1 _____   2 _____   3 _____   4 _____   5 _____   6 _____   Least

Or, there is not enough information to determine the masses of the stars. _____ (indicate with a check mark)

Carefully explain your reasoning for ranking this way:

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