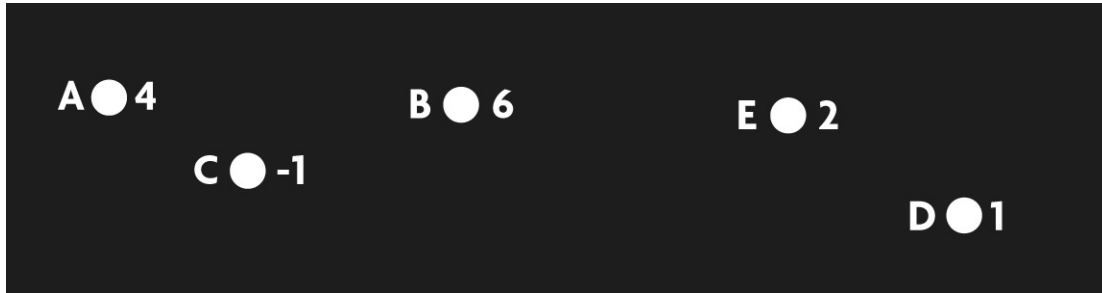


Astronomy Ranking Task: Apparent and Absolute Magnitude

Exercise #3

Description: The figure below shows five stars (A - E) as they appear in the night sky from Earth. The absolute magnitude number is also provided to the right of each star. Note that all the stars are shown with the same shading to indicate how they would appear in the sky.



A. Ranking Instructions: Rank the brightness (from greatest to least) of each star (A – E) as it appears in the night sky.

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the brightness of each star appears the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

B. Ranking Instructions: Rank the absolute magnitude number (from greatest to least) of each star (A – E).

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the absolute magnitude number of each star would be the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

C. Ranking Instructions: Rank the total amount of energy (from greatest to least) given off by each star (A – E).

Ranking Order: Greatest 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ Least

Or, the total amount of energy given off by each star would be the same. _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

D. Ranking Instructions: Rank the distance (from farthest to closest) of each star (A – E) from Earth.

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

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

Carefully explain your reasoning for ranking this way:
